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REVIEWS OF NEW BOOKS.

SANATORY MEASURES.

Change of Air: Fallacies regarding it. By J. C. Atkinson, Esq., Surgeon. Pp. 77. Ollivier.

Much practical experience and astute observation are apparent in this small but valuable volume. Human nature is fond of changes; and the recommendation of change of air is ever welcome to the invalid, tired and hateful of the air in which he has been suffering. So, when the doctor prescribes that course it is always welcome; and if the remove does not cure the patient, it at least carries him out of sight to die. Mr. Atkinson is no advocate for these "get out of the ways." He thinks that sick people, like bad children, are often best at home; and in expounding this theory he entertains a number of questions of very great interest to us all, and some of them addressed to matters of much present and future consequence. Thus, for instance, speaking of diseases prevalent in London, and ascribed, as fancy or ignorance may dictate, to many different causes, he truly remarks,—

"The solids and fluids which are consumed by the poorer classes in London and large towns are nearly all adulterated; the beers, ales, and porters have all been, as it is commonly termed, doctored; the cheap bread is adulterated; the gin, an article of too general consumption, is, I may say, poisoned. How can we expect, under such circumstances, and with so much dissipation in its broadest acceptance, together with excesses of various kinds, and a total disregard to the laws of nature, that the ratio of health should be favourable? But why attribute all maladies to the influence of what is termed the 'Disease-Mist,' singularly so called by the Registrar-General?"

"A man goes on a house-top or on a monument top, and sees a thickening of the atmosphere here and there, and this is confidently spoken of by him as the 'Disease-Mist,' caused by the breaths of the thousands living in the quarter of the apparent fog. He may be very properly told, that if the wind had changed when he was thus ruminating in his lofty position, and it rose high, the whole face of the apparently foggy prospect would have changed, and he would have seen the once dark spot cleared off, as by a magician's wand; and, further, he may be told that it entirely depends in what part of the metropolis he made his observations. The wind, and quarter of town, will always cause an alteration in appearances."

The adulteration and scantiness of food among the poor are the origin of more ill health than it is agreeable to believe can exist in a highly civilised and Christian country. It is well to ascribe them to ought else.

On the treatment of disease, particularly consumption and scrofula, the writer is no less successful in hitting (as it appears to us) at least one nail, if not more, on the head. He says,—

"The large metropolitan hospitals, however well calculated for the surgical department of medicine, are ill-suited for cases in which much delicacy of constitution exists. I have known numerous persons who have been placed in the large wards of the hospitals, perhaps suffering under some adventitious character of disorder, but who could not endure them (ventilation having been carried to a great extent in all the noble institutions of England, owing to the popular impression that pure air is the greatest of nature's benefits), as their lungs had been unused to respire an element, pure certainly, but prejudicial to those who have been accustomed to small rooms;—*habit* cannot, and must not, be too

rapidly interfered with. I mean to say, our functions of life acquire *habits*, so to speak, according to the position of the individual in the world.

"What think you of dieting a person in affluent circumstances, who can command all the delicacies of life, on old Dorset cheese and dry bread? why, if you did not bring out the change gradually and carefully, you would starve your man. And you would starve, in like manner, the Dorset labourer, who had accommodated his stomach to the above commonly supposed indigestible diet, by compelling him to adopt the luxurious habits of a citizen."

"Moisture has been considered as a great enemy to health; and all our late investigations on the subject have pronounced on the evils of inhaling vapours even of an aqueous nature. How will men of these notions be able to combat the oldest practice for the preservation of health—*viz.*, early rising. The sun, first risen from its bed, spreads its effulgent calorific rays over the earth's surface, and causes evaporation; it is this watery vapour, so often objected to by valitudinarians, that is so conducive to the free respiratory action; it is this, with the genial warmth of the luminary, that gives salutary influence to the circulation; not by expediting the circulation, but by the moisture and the electric rays equalizing and improving all the functions of life. All old people have uniformly adopted the practice of early rising."

Other matters of proposed scientific improvements, which have led to much experiment and much controversy, are thus sensibly alluded to,—

"The subject of ventilation, as at present pursued by chemists and others in this metropolis, has been considered purely in a theoretical point of view; it has not been treated as it ought to have been—in a practical manner, from practical deductions. The Houses of Parliament, club-houses, theatres, and large buildings, have latterly undergone much boring; the object of this latter process being to convey the pure element of air and nothing else; as if purity of air tended in any way to the prolongation of human life."

"For instance, *gluten*, the principal nutritious element of wheat, is not the material supplied unmixed; if, in fact, we were to live on this pure chemical matter entirely, we should die. We have other things of daily consumption, such as wines and fermented liquors; but we do not ask for *alcohol*. Again, tea and coffee, very wholesome as they are, are not substituted for *Theine* and *Caffeine*; in fact, I might range over the whole of edible substances, and always find that nature, and not chemistry, must be looked up to for regulating our conduct."

"It is well known that the atmosphere, which is as necessary as food, is composed of oxygen, nitrogen, carbonic acid, and watery vapour according to locality. The attack generally made has been on carbonic acid,—that it is highly prejudicial to human life to have even an atom of it mixed with air. This I consider as absurd. Many persons find considerable advantage in being confined in small rooms, made almost airtight, and yet withal improve in general health wonderfully—more especially, as I have before stated, if there be any tubercular disease to remedy. The Esquimaux, the Russians, and many of the northern tribes of Europe, shut up their huts almost hermetically, and yet suffer no inconvenience."

"The carbonic acid is known to be eliminated both by the lungs and skin; its property is of a sedative kind, it quiets the whole system in small quantities, and is wholesome and necessary to the existence of mankind, as an All-wise Providence intended. Soda-water and Seidlitz-water have large quantities of carbonic acid in suspension; and who questions the

exquisitely quieting influence of its action on the nerves and stomach? Not one! and yet what opposition has there been to inhaling this really eneficial gas. If water be impregnated with carbonic acid, it diminishes thirst, lessens the morbid heat of the body, and acts as a diuretic. It is highly esteemed in the cure of typhus fever, in irritability and weakness of the stomach, and disorders of the kidneys. I am of opinion that oxygen in a state of purity is just as pernicious as carbonic acid, but the All-wise Creator has happily blended them for beneficial purposes, which do not appear sufficiently palpable to the theorist, who wishes, entirely on chemical grounds, to be supplied with oxygen alone! It has been observed lately, after much statistical discussion, that the average of mortality is as high in Marylebone and the City of London as the most unhealthy districts in the metropolis. Look to this! After so much talking about sewers and drainages, the places without them are found as healthful as those with them."

"Notwithstanding numerous speculations in the present day, on the subject of the propagation of epidemics generally, very little as yet is known of the influence of atmospheric agents upon the animal economy, and their connexion with epidemic diseases. I do not wish to charge the Sanatory Associations and their promoters with any wilful exaggerations, for we know that much good has resulted from the carrying out of excellent arrangements for the removal of animal and vegetable refuse in a state of decomposition, and which have tended to great good; all I wish is, to acquaint all men that the investigations they have made are only apparently correct; for I am convinced that both the diseases and the mortality resulting from them have not had their origin as stated by these gentlemen. Causes widely different have influenced constitutions, and these have not been traced to their proper source. *The influence of climate and season, diet, ordinary habits of life, and endemic and epidemic causes*, require to be taken into account, and we must not presume that we have arrived at a satisfactory theory of the origin of disease, until we have found one resting on irrefragable facts."

Without going farther than these dips into the things of daily and immediate usefulness, on which Mr. Atkinson offers his opinions,—opinions we neither altogether adhere to nor dispute, we beg to conclude our notice of his treatise with a summary extract, explanatory of his views as they regard the main point which gives the title to his publication,—

"It will be clearly seen from the foregoing observations, that my great object is to undeceive the public mind on the subject of 'Change of Air,' and to point out the course that ought to be pursued in that respect with reference to Consumption and Scrofula; convinced as I am of the extensive mischief that has been done by a mistaken and indiscriminate recommendation of change of climate, when no such change is called for. 'Change of Air' requires to be employed with the same precaution, care, and judgment, in the cases under notice, as substances of the *Materia Medica*. A small dose may be fatal to a patient when not rightly administered, while a large dose of the same may prove not only not pernicious but highly necessary and beneficial."

"We all know that sea-air is pure and bracing, and that it is impregnated with a slight proportion of saline matter, common salt, iodine, bromine, and some others; and these substances, in an aerial form, by acting chemically on the system through the lungs, have relieved cases of Scrofulous character; and we have, on the other hand, on the land, more

particularly in rural plains and valleys, a more mixed kind of atmosphere, in which various particles of gases of different kinds, according to locality, are combined; and this is better calculated for the delicate chested—otherwise the consumptive—than an atmosphere in which a large portion of oxygen is contained."

POLITICAL PUBLICATIONS, ETC.

STIRRING public events are sure to stir the press; and every question gets speedily laden with big and little books, pamphlets, and cheap indescribables. We class a few together, in addition to those we have noticed during the last six months.

Notes on Switzerland. By the Rev. M. J. Mayers. Parker.

Gives an historical retrospect of the political contentions which led to the late civil war, and a description of the military conflicts. Tourists in Switzerland may with advantage make it a sort of hand-book companion to the ordinary guide, though more important European revolutions have since absorbed the affairs of Switzerland.

Lemartine and the Men of the Republic. Clarke.

Biographical sketches of the principal persons who rose to power on the ruins of the February revolution. *History of French Revolutions from 1789 to the Present Time.* Chambers.

The names of the publishers are sufficient to vouch for this, one of their Books for the People. We have, however, only Part I. before us.

A Short Introduction to the Works of Charles Fourier. Pp. 26. Rolandi.

An association, calling itself The Phalansterian, has been formed to propagate the principles of Fourier. This is a synopsis of his doctrines and exposition of their views as opposed to communism, but still contemplating radical changes in the constitution of society, and especially in the relative conditions of Labour, Capital, and Talent.

Revolution in Europe. Edited by Percy St. John. Three Monthly Nos. Simpkin, Marshall, and Co.

Political descriptions of events as they come to pass in France and throughout the Continent of Europe. Mr. St. John is laborious in gathering information, and it is well known that he can put together in an able and workmanlike manner.

An Historical Sketch of the French Revolution of 1848. Cradock and Co.

"The story of the Bear and Fiddle Begins, but breaks off in the middle."

So is this account obliged to break off; for the revolution it records is but the beginning of a series. It relates the circumstances of that of February to the proclamation of the republic.

ITALY.

Italy in the Nineteenth Century, contrasted with its Past Condition.

(Second Notice.)

A PORTRAIT of Pope Pius IX. is prefixed to the second volume, and fairly ushers in the author to Rome and his walks through the eternal city. These walks we think every reader will be gratified to pursue with the writer; for they touch upon many interesting topics of antiquities, arts, and present things, and are described in a very easy and agreeable manner. They will, however, speak for themselves, and we may abstain from preliminary praise. The author seems to doubt himself, but without cause, when he says:

"Minute descriptions of great towns are proverbially tedious,—of Rome they may be thought superfluous; an outline, however, of the famous city, its topography, and general aspect will, perhaps, be acceptable, if not entertaining. The impatient traveller enters within the venerable walls of Rome by the Porta del Popolo, and quickly catches the chief features of the scene displayed to his straining eyes. A church on his left-hand, two more guarding the Corso at the opposite extremity of a beautiful piazza, an Egyptian obelisk raising its tall, graceful proportions to the skies, ancient even when Cæsar Augustus tore it from Heliopolis to adorn the

Imperial City,—a sparkling fountain at its base, the bright waters gushing into an ample basin through the mouths of four marble lions couchant,—two smaller fountains, one at either side of the broad piazza, glistening in the sun. Statues adorn the front of the terraces leading by a winding road, turning close from the church of St. Maria del Popolo, up to the Pincian Hill, which is crowned by a platform commanding an extensive view of the city and its glorious monuments. Hastening onwards through the splendid street named the Corso, adorned with many noble edifices, the traveller will pass churches, palaces, Aurelian's column, and almost by a straight line will arrive at the Forum, and the chief wonders of Old Rome. The yellow Tiber flows near to the spot from whence our traveller started in the Piazza del Popolo, but it is obscured from view by the Via Ripetta, which runs close by the banks of the river in a south-westerly direction. The bulk of the inhabitants dwell in the space between the Corso and Old Tiber, and are closely packed, a few in fine palaces, the many in cheerless, shabby dwellings. A third street, running from the same starting-point in a south-easterly direction, leads to the Piazza di Spagna, where another fountain cools the air, and the huge building called the Propaganda blocks up all further view; but the traveller will meet other fountains, and massive palaces, and churches, and piazzas, interspersed with venerable ruins. Whithersoever he turns his eager steps, he is alternately delighted and disgusted; the majestic remains of a great antiquity he wishes to examine with critical accuracy, but he stands in the midst of inconceivable filth. He turns to the churches, sacred in the eyes of Christians,—but often not safe from defilement in the City of Churches. He finds in his guide-book, and notes on the map, numerous piazzas which he imagines to be fine squares, clean, if not splendid; he observes, with some few exceptions, they resemble waste-ground reserved for rubbish or the refuse of a great city. Persevering in his walk through Rome, he finds himself more severely fagged in one hour than he would have been in London in three; for the streets are generally narrow and gloomy, seldom clean, the pavement sharp and broken, there being no flagging with the exception of the Corso, where it is three feet broad, and of so ragged a material, that little knobs of stone rise up in the flags, and almost penetrate the stoutest boot. Following the map to gain an object of interest, he turns into narrow by-ways and lanes, and then learns, through the medium of his senses, what amount of filth can be endured by human nature.

"The Ghetto startles him, but the Jews flourish under adverse circumstances everywhere. The shops he discovers are generally poor, their contents paltry, and whatever is useful, the produce of London or Paris. A principal source of business is the imitating in bronze the classic monuments, and at every corner is an artist's studio. He remarks no substantial houses building for a respectable middle-class, but several old ones plastered with white cement to attract tenants in the English quarter; fifty dwellings are inspected before he meets one congenial to his English taste, for if an invalid, he wants sunshine, and does not want malaria. He desires wholesome air, and spacious apartments, with a good look-out; yet he finds several excellent apartments, but looking into a yard or court everlastingly covered with wet or filth. He thus learns there never was a real, opulent middle-class in Modern Rome, and that cardinals and bishops cannot, even with their fine palaces, make a flourishing city. He observes the people have a cheerless, gloomy air, incompatible with a healthy freedom, or a happy political condition; that there is no symptom of extensive business, lucrative traffic, or commerce of any kind. Miserable shelties, dragging the Campagna wine-wagons or faggots, dispute the way with his eminence the cardinal's gilded coach. But still does he ever find, to his inexpressible delight, that into no quarter of the once Imperial City, no palace, no church, or building, or studio, can he put his head without meeting with some object of interest and art, novel

to his eyes, beautiful or wonderful. He forgets all inconveniences, forgives the government and the Pope, and rejoices in his visit to the Eternal City."

Of the far-famed statue of Pompey mentioned by Gibbon and Hobhouse, Mr. Whiteside says:

"I have seen many busts of Augustus Cæsar, and nothing can be more absurd than the assertion that the statue of Pompey could ever have been meant for the Emperor: his busts and the statue have not the slightest resemblance. The traits of the statue resemble the medals of Pompey—a fact which removes all reasonable doubt as to the person for whom it was intended. The authorities satisfied me the statue is genuine; and the fact that Napoleon coveted its possession to adorn Paris, strengthened my conviction. The proprietor, (Spada,) a nobleman employed in the administration of affairs under the Emperor, replied to Buonaparte's unreasonable demand, that he wished to preserve to his posterity the classic statue of a noble Roman, which had been handed down to him from his ancestors. The Emperor desisted from his unreasonable demand, and 'great Pompey's statue' has been suffered to stand in gloomy grandeur in an old baronial hall of the Spada Palace, the proprietors of which have not crossed its threshold for twenty-five years. Political reasons, it is rumoured, induced this noble family, under the reign of Pope Gregory, to absent themselves from their Roman palace, which is tenanted by 'Great Pompey's statue,' and the steward."

"Pompey was avenged; at the base of his statue, which we have described, the bloody Cæsar lay."

Of Rome at night, and the expediency of carrying a stout bludgeon, Mr. Whiteside observes:

"There are various stations through the city when the Papal troops are snugly ensconced, and from whence they occasionally, throughout the night, as seldom as possible, emerge; and sentries are there, not to be forgotten, at the head of several piazzas, and on the steps of some, to check the unpleasant practice which formerly prevailed of plundering and stabbing passengers at these convenient spots. Sentries there are, also, at all the gates; but these gates, or most of them, are so distant from the abodes of civilized people, that it might cost a man his life to reach the sentry, and it might be as well not to meet the latter functionary alone either.

"But there is no police through the streets of Rome at night, nor any system of patrol, which give an additional value to the oak-stick. Under the foregoing circumstances, the words of Juvenal have some application to modern Rome:

—"Poenis ignavus haberi
Et subiti casus improvidus ad conam sis
Intestatus cas."

"It is highly amusing to observe an Italian family, belonging to the so-called middle-class, returning to their homes at a late hour of the night; their lanterns carefully lighted, and the family skillfully marshalled for the enterprise. I have observed the domestic party halt before their habitations and chatter loudly, make a noise, almost a disturbance, and for no apparently assignable reason. I once asked why this was done, and was answered, to clear the stairs. For it should be understood the entrance to many houses of the middle classes is through an archway, pitch dark, open to the public, dismal often, and filthy. To other habitations there is a big stone doorway, but no door, nor lamp, nor porter; there may be half a dozen families in one such house, each entrenched in their peculiar flat. No one family has

"Modern Rome occupies a triangular space, each side of which is nearly two miles long. The greater part of the city lies low, about forty feet above the level of the sea, although but sixteen miles distant from it. The Tiber where it enters Rome is but twenty feet above the sea. The city is divided into—

84 parishes and 300 churches,
154 churches served by secular clergy,
130 churches served by regular clergy (monks),
64 monasteries and convents for men,
50 monasteries and convents for women.

"It has some 500 streets, 270 lanes, 140 palaces, and 5000 shops, 340 noblemen's houses, of which 60 might be considered palaces. As to the population, when Gibbon quitted Rome, in 1783, he says he left the population, without the Jews, 161,899, the Jews being calculated at about 10,000."

any authority over the hall-door, or rather the place where the hall-door might be expected to be, more than another, and, to do them justice, none regard it; never cleansing it, but, on the contrary, seeming to pride themselves on doing the very thing in respect of it which they ought not to do. Also, be it known, in each door in every flat, there is cut a little trap which may be opened first, to enable the terrified inmates to see who goes there, before they commit themselves by opening the door. This precaution is generally practised even by day.

"Imagine an Italian family arrived at their pleasant abode. Under the circumstances, one must admit and admire the wisdom of their proceedings, in halting for a suitable interval before they undertake the perilous movement inwards; and coughing, chatting, laughing, in order to clear the staircase, and afford ample opportunity to any thieves, assassins, or disagreeable intruders, to retire for the present, at least, and enable the happy family to reach their flat in safety.

"But I have not enumerated all the perils of the night: it reigns or rather pours. A Roman torrent is a very different thing from an English shower. You put up your umbrella; it is laid flat upon your head in an instant. The flimsy Parisian article is viewed with contempt by the Italian people. The native carries (when apprehensive of rain, which may continue three days without cessation) a ponderous machine, which, when opened out, resembles a little tent suspended in the air, under which he walks securely. The construction of the Italian umbrella is simple enough,—a mass of oiled calico is attached to a stout pole, and this, when spread, resists the torrent wonderfully. In a short time the spouts begin to play, the jets d'eau of Modern Rome. I think these spouts have been dexterously contrived to aid in washing the streets, a process the natives would perish rather than undertake. These ducts are about two feet long, and project from the roofs of the houses; through such spouts the water is made to spin into the middle of the street with admirable effect; for no deposit can withstand its power. But while the two-fold deluge from the houses and the heavens may be so useful in dispensing with the labour of scavengers, it increases the discomfort of the passenger: he must keep close to the eaves of the houses, and get under cover speedily as he can—then he listens to the play of the waters with an almost inconceivable degree of pleasure."

More nuisances are alluded to, but we need not be more explicit; and in finishing his night ramble, the author concludes:

"I have heard it said, in Rome, by the priests, that the only thing England required to become truly great was to embrace once more the ancient religion. It has often struck me what a surprising change would be wrought even in outward things in Rome if a revolution were effected in the faith of the people, and they became Protestant. The innumerable convents and monasteries would be no longer necessary, their ample funds would be applicable to really useful purposes—sturdy monks who are not ashamed to beg would be obliged to work. Three-fourths of the priesthood must turn farmers, as their services could be well dispensed with; if they possessed talents they might become authors or teachers. Religious corporations would get no more grants of land, and what they had before obtained would now be cultivated. Freedom of conscience would be established, for the true Protestant never persecutes. Political liberty would follow. The citizens would get a share in the management of their own concerns. Cardinals would cease to be scavengers, cleanliness would no longer be proscribed, a rational police system would be introduced, literature would flourish. Rome, happily and quietly revolutionized, in a month would rise to a pitch of true glory she has never yet attained."

Of the civic authorities, Mr. Whiteside is told by a substantial householder:

"We have," said he, "no control over, nor share in the management of the city, nor means of expressing our opinions on the subject. The entire

absolute superintendence of all these matters is vested in a cardinal; he never touches the ground himself, and cares nothing for anybody else. It would be unusual, as well as dangerous to complain of his administration, and even if we did, we should be sure to get no redress; so we are silent, hoping for better days."

The part played by the Jesuits is so far described, on a visit to their college, in the annexed portions of the description:

"Quickly admitted, we lounged through the long galleries until a gentleman arrived to guide us over the house. He proved to be Mr. Glover, an elderly Englishman, who has been twenty years in this college, possessing, it is said, an influence second only to that of the general himself. This accomplished Jesuit must have been in high favour with Pope Gregory, as he was chosen censor over books published in two languages, English, and, I believe, Latin. His name appears in the *Imprimatur* thus, *Nihil Obstat. Glover*. We were fortunate in our guide, who possessed an intelligent countenance, a mild agreeable manner, and gentle voice. He took us over the whole institution; as we passed along the galleries several of the Order met our party, each saluted our guide, touching their cap with a formal gravity. The dress of the whole company of Jesuits in their college is the same, a black cloth coat, which from the waist falls round the person like a woman's garment, in the outside of which is a small pocket. Every brother wore a tight black skull cap. Cleanliness and coolness pervaded the vast building. Our guide remarked, that the inmates enjoyed perfect health in the heat of summer. These Jesuits have no parishes, but affixed to the walls in one gallery we saw a kind of ticket-case, where was labelled the name of a brother, and his district in the city for that day. The sphere of daily duty is thus arranged every morning, so there is no conflict or confusion amongst the brethren; each man has the scene of his appropriate exertions allotted to him, it may be presumed, according to the nature of the work to be done, and the capacity of the particular Jesuit to do it. We may further conclude a report is made to the general by each brother of his daily labours; what their duties may be I know not, for these Jesuits have no parochial functions; we may charitably believe they visit the sick, confirm the wavering, hear confessions, and spread their doctrines amongst the young. What at once struck me as curious in the system was, that here existed a skilful police, in vigorous daily action over the entire city of Rome, each officer having no larger district than he could perfectly attend to; thus manifestly the Jesuit general each morning could tell exactly the state of political feeling in every quarter of the city, and regulate the movements of his troops accordingly, a formidable corps; and certainly from discipline, habits, knowledge they would be so, either as confederates or enemies."

"Every facility for study seems afforded: what the character of the books on the well-filled shelves were I cannot say, but we received much amusement from the announcement that in the small apartment (kept locked) at the end of the library were preserved all the books ever written against the Jesuits. Expressing a desire to see this room, it was at once opened, and certainly, although small compared with the apartment we had quitted, there stood a formidable array of volumes around us, in all languages. My companion coolly inquired whether 'The Wandering Jew,' by Eugene Sue, was in the collection: the brother, who was now our guide, quietly replied it had not yet arrived, but was daily expected. We were then led to the private door into the church, and left to our meditations. We had spent two hours in the establishment, having received the utmost courtesy and attention. It was clean, orderly, and seemed regulated by a perfect system of discipline, understood by all its members, who number, I think, 140, but I am not positive as to this statement. Their control over the press in Rome is said to be complete. The Jesuit himself submits to a double

censorship—that is, first, to the censor of the order, that nothing may be printed not acceptable to the general, or the principles of the confederation; and secondly, to the censor, whomsoever he may be, who is appointed by the state."

The account of the Propaganda induces a comparison, and the author asks—

"What system does the Church of England oppose to the compact and perfect discipline of the Propaganda? Where in England are these youths from remote quarters of the globe, training under able masters to return in due season to their own king doms, and convert their countrymen? What large well-disciplined school exists to educate even Englishmen for missionary labours? Separate societies there are, no doubt, accomplishing much good. But I believe the training-school at Islington consists of twenty-four young men thrown promiscuously together, and that missionaries are picked up here and there, as they can be got. I am aware that theological institutions for the education and training of clergy have been founded in Toronto, Quebec, and several other colonies, especially in the East Indies. These are valuable but disjointed efforts. Where is there any institution in England to be compared with the Propaganda in Rome? But is indomitable energy only to be enlisted in the cause of error? Is not truth equally inspiring? Let the Bishops of the Church of England bestir themselves in this great and pressing matter, and turn their attention towards accomplishing a glorious and comprehensive work. Surely they have scope for the exertion of all their talents, learning, piety, and zeal, to prove a match for their powerful opponents of the Propaganda. Why not resolve on the foundation, upon scriptural principles, of such a college as the Propaganda, to be built in some healthy convenient district of England? The English people for a noble purpose, wisely undertaken under the direction of the heads of the pure church, will supply the means; able masters, and teachers, and disciplinarians, may be scarce, but they are not impossible to find. Let the bishops pick out in each diocese energetic youths adapted to missionary life, for the purpose of training in this college. A select number of foreigners might be imported and usefully instructed in the reformed faith, and the system of our church, and then returned to their own country to teach their fellow-countrymen as natives only can teach. Language should be systematically taught, and some knowledge of the art of medicine. Nor do I see why religious artisans and agriculturists might not be valuable helps to the success of missions."

Mr. Whiteside is sore upon the Oxford Tractarians, and gibes them on the derivation of the Pope's title, Papa, and the reason why a cardinal wears red stockings, and is called "Your Eminence." A true version of the tragedy of the Cenci is brought in by the sight of Guido's wonderful picture of Beatrice, and told in a style to delight the lovers of such tales of horrid interest. It contradicts the commonly received accounts, and proclaims the innocence of the unhappy heroine. Nearly fifty pages are devoted to this theme, which would make a splendid magazine article. But we return to Rome and modern days:

"Close to St. Peter's is the interesting manufactory of Mosaics in the Vatican, carried on in a series of chambers, immense in length, in which, owing, it is apprehended, to financial embarrassments, but few artists are now engaged; however, we saw one picture copying, and thus had the opportunity of beholding the wonderful process whereby the greatest effort of Raffaele's pencil has been copied in the most delicate shades in mosaic. We obtained some specimens of the chemical composition of which the mosaic is made, and of which there are in the manufactory twenty thousand tints."

Here follows a tale not so sanguinary as that of the Cenci, and shorter for our purpose, and curious:

"We return from our delightful walk by the prison of the Inquisition, close to the Vatican. Within these gloomy walls has been confined for many years a very extraordinary person, the Archbishop of Memphis. Passing on foot in this quarter of Rome,

we were conversing with a student for the priesthood, who said mysteriously, 'There has been a bishop in prison there, pointing to the Inquisition, 'for many years. Curiosity impelled me afterwards to inquire into the history of the ecclesiastic so long confined, when the following singular narrative was given me by a clergyman, who appeared to be well informed on the subject:—In the reign of Leo XII., some twenty-five years ago, that Pope received a letter from the Pacha of Egypt, informing his Holiness, that he and a large portion of his subjects desired to embrace Christianity, and to be received into the bosom of the Church of Rome; and announcing that he and they were willing to conform, provided the Pope sent out an archbishop, with a suitable train of ecclesiastics, and requesting his Holiness would do him the favour of appointing a certain young student, whom he named, the first Archbishop of Memphis, and despatch him to Egypt. No doubt whatever was entertained of the truth of this communication, but an objection presented itself in the youth of the ecclesiastical student whom the Pacha wished to have consecrated archbishop. The Pope consulted the cardinals, who advised him not to make so dangerous a precedent as that of raising a novice to so high a rank in the church; but his Holiness, tempted by the desire of extending the empire of the church, and converting a kingdom to Christianity, resolved to conform to the wishes of the Pacha, and did consecrate the youth Archbishop of Memphis.

"The new Archbishop was sent out attended by a train of priests to Egypt. When the ship arrived, a communication was made to the authorities in Egypt, who repudiated the Archbishop and declared the affair was an imposition. His Grace then confessed the fraud, was instantly arrested, and reconducted to Rome. He had been the author of the letter which imposed on the Pope—his original intention having been that of confessing to the Pope as a priest after his consecration the imposition he had practised; and as the Pope could not betray a secret imparted to him in the confessional, the offender might have obtained absolution in time, and so escaped punishment. Whether this would have been practicable I know not; but as it was not accomplished, and as the youth had the rank of archbishop indelibly imprinted on him, nothing remained but to confine his Grace for the remainder of his life; and accordingly he was at once consigned to this prison near the Vatican, where he has now spent twenty-five summers; and occasionally the Archbishop of Memphis may be seen putting his head out of the window to breathe the fresh air of heaven, and gaze upon the Vatican from a prison whence he never can escape."

(To be continued.)

THE LAST OF ELIA.

Sergeant Talfourd's Final Memorials of Charles Lamb.

(Fourth Notice—Conclusion.)

LITTLE introduction is necessary to our concluding extracts from these Final Memorials, from which we have already borrowed so much delightful matter.

"Lamb's Wednesday nights compared with the evenings of Holland House—His dead companions, Dyer, Godwin, Thelwall, Hazlitt, Barnes, Haydon, Coleridge, and others—Last glimpses of Charles and Mary Lamb.

"Gone, all are gone, the old familiar faces."

The Holland House parties were, no doubt, generally great, social treats, and the assemblage of the lions of the day, like other shows, entertaining. But to paint the imperious presiding deity there as an angel is rather a stretch of the imagination. "Let us call to mind," says the learned Sergeant, warming with the theme, "the aspects of each scene, before we attempt to tell of the conversation, which will be harder to recall and impossible to characterise. And first, let us invite the reader to assist at a dinner at Holland House in the height of the London and Parliamentary season, say a Saturday in June. It is scarcely seven—for the luxuries of the house are enhanced by a punctuality in the main object of the day, which yields to no dilatory guest of whatever

pretension—and you are seated in an oblong room, rich in old gilding, opposite a deep recess, pierced by large old windows, through which the rich branches of trees bathed in golden light, just admit the faint outline of the Surrey hills. Among the guests are some perhaps of the highest rank, always some of high political importance, about whom the interest of busy life gathers, intermixed with others eminent already in literature or art, or of that dawning promise which the hostess delights to discover and the host to smile on. All are assembled for the purpose of enjoyment; the anxieties of the minister, the feverish struggles of the partisan, the silent toils of the artist or critic, are finished for the week; professional and literary jealousies are hushed; sickness, decrepitude, and death, are silently voted shadows; and the brilliant assemblage is prepared to exercise to the highest degree the extraordinary privilege of mortals to live in the knowledge of mortality without its consciousness, and to people the present hour with delights, as if a man lived and laughed and enjoyed in this world for ever. Every appliance of physical luxury which the most delicate art can supply, attends on each; every faint wish which luxury creates is anticipated; the noblest and most gracious countenance in the world smiles over the happiness it is diffusing, and redoubles it by cordial invitations and encouraging words, which set the humblest stranger guest at perfect ease. As the dinner merges into the dessert, and the sunset casts a richer glow on the branches, still, or lightly waving in the evening light, and on the scene within, the harmony of all sensations becomes more perfect; a delighted and delighting chuckle invites attention to some joyous sally of the richest intellectual wit reflected in the faces of all, even to the favourite page in green, who attends his mistress with duty like that of the antique world; the choicest wines are enhanced in their liberal but temperate use by the vista opened in Lord Holland's tales of bacchanalian evenings at Brook's with Fox and Sheridan, when potatoes deeper and more serious rewarded the statesman's toils and shortened his days; until, at length, the serene pleasure of conversation of the now carelessly scattered groups, is enjoyed in that long, unrivalled library in which Addison drank, and mused, and wrote; where every living grace attends; and more than echoes talk along the walls.' One happy peculiarity of these assemblies was, the number of persons in different stations and of various celebrity, who were gratified by seeing, still more, in hearing and knowing each other; the statesman was relieved by association with the poet, of whom he had heard and partially read; and the poet was elevated by the courtesy which 'bared the great heart' which 'beats beneath a star'; and each felt, not rarely, the true dignity of the other, modestly expanding under the most genial auspices."

"Literature and Art supplied the favourite topics to each of these assemblies,—both discussed with earnest admiration, but surveyed in different aspects. The conversation at Lord Holland's was wont to mirror the happiest aspects of the living mind; to celebrate the latest discoveries in science; to echo the quarterly decisions of imperial criticism; to reflect the modest glow of young reputations;—all was gay, graceful, decisive, as if the pen of Jeffrey could have spoken; or, if it reverted to old times, it rejoiced in those classical associations which are ever young. At Lamb's, on the other hand, the topics were chiefly sought among the obscure and remote; the odd, the quaint, the fantastic were drawn out from their dusty recesses; nothing could be more foreign to its embrace than the modern circulating library, even when it teemed with the Scotch novels. Whatever the subject was, however, in the more aristocratic, or the humbler sphere, it was always discussed by those best entitled to talk on it; no others had a chance of being heard. This remarkable freedom from *boreds* was produced in Lamb's circle by the authoritative texture of his commanding minds; in Lord Holland's, by the more direct and more genial influence of the hostess, which checked that tenacity of subject and opinion which sometimes

broke the charm of Lamb's parties by 'a duel in the form of a debate.' Perhaps beyond any other hostess,—certainly far beyond any host, Lady Holland possessed the tact of perceiving, and the power of evoking the various capacities which lurked in every part of the brilliant circles over which she presided, and restrained each to its appropriate sphere, and portion of the evening. To enkindle the enthusiasm of an artist on the theme over which he had achieved the most facile mastery; to set loose the heart of the rustic poet, and imbue his speech with the freedom of his native hills; to draw from the adventurous traveller a breathing picture of his most imminent danger; or to embolden the bashful soldier to disclose his own share in the perils and glories of some famous battle-field; to encourage the generous praise of friendship when the speaker and the subject reflected interest on each other; or win from an awkward man of science the secret history of a discovery which had astonished the world; to conduct these brilliant developments to the height of satisfaction, and then to shift the scene by the magic of a word, were among her nightly successes. And if this extraordinary power over the elements of social enjoyment was sometimes wielded without the entire concealment of its despotism; if a decisive cheek sometimes rebuked a speaker who might intercept the variegated beauty of Jeffrey's indulgent criticism, or the just announced and self-rewarded in Sydney Smith's cordial and triumphant laugh, the authority was too clearly exerted for the evening's prosperity, and too manifestly impelled by an urgent consciousness of the value of these golden hours which were fleeting within its confines, to sadden the enforced silence with more than a momentary regret. If ever her prohibition,—clear, abrupt, and decisive,—indicated more than a preferable regard for livelier discourse, it was when a depreciatory tone was adopted towards genius, or goodness, or honest endeavour, or when some friend, personal or intellectual, was mentioned in slighting phrase. Habituated to a generous partisanship, by strong sympathy with a great political cause, she carried the fidelity of her devotion to that cause into her social relations, and was ever the truest and the fastest of friends. The tendency, often more idle than malicious, to soften down the intellectual claims of the absent, which so insidiously besets literary conversation, and teaches a superficial insincerity, even to substantial esteem and regard, and which was sometimes insinuated into the conversation of Lamb's friends, though never into his own, found no favour in her presence; and hence the conversations over which she presided, perhaps beyond all that ever flashed with a kindred splendor, were marked by that integrity of good nature which might admit of their exact repetition to every living individual whose merits were discussed, without the danger of inflicting pain. Under her auspices, not only all critical, but all personal talk was tinged with kindness; the strong interest which she took in the happiness of her friends, shed a peculiar sunniness over the aspects of life presented by the common topics of alliances, and marriages, and promotions; and there was not a hopeful engagement, or a happy wedding, or a promotion of a friend's son, or a new intellectual triumph of any youth with whose name and history she was familiar, but became an event on which she expected and required congratulation as on a part of her own fortune."

"The Journal of a Week," kept by Lord Holland himself, and still (we hope) remaining in the manuscript we have read, gives a different view of these scenes, and the individuals who played their parts in them. It was written at the time, from day to day, and is, we suspect, a picture much nearer the truth than that so brightly tinged from the recollection of the author of *Ion*. The biographical sketches indicated in the foregoing list are interesting additions to the principal memoir, and some of the anecdotes curiously characteristic. For example of Godwin.—

"He met," we are told, "the exigencies which the vicissitudes of business sometimes caused, with the trusting simplicity which marked his course—he asked his friends for aid without scruple, considering

that their means were justly the due of one who toiled in thought for their inward life, and had little time to provide for his own outward existence; and took their excuses, when offered, without doubt or offence. The very next day after I had been honoured and delighted by an introduction to him at Lamb's chambers, I was made still more proud and happy by his appearance at my own on such an errand—which my poverty, not my will, rendered abortive. After some pleasant chat on indifferent matters, he carelessly observed, that he had a little bill for 150*l.* falling due on the morrow, which he had forgotten till that morning, and desired the loan of the necessary amount for a few weeks. At first, in eager hope of being able thus to oblige one whom I regarded with admiration akin to awe, I began to consider whether it was possible for me to raise such a sum; but, alas! a moment's reflection sufficed to convince me that the hope was vain, and I was obliged, with much confusion, to assure my distinguished visitor how glad I should have been to serve him, but that I was only just starting as a special pleader, was obliged to write for magazines to help me on, and had not such a sum in the world. 'Oh dear,' said the philosopher, 'I thought you were a young gentleman of fortune—don't mention it—don't mention it; I shall do very well elsewhere.'—and then, in the most gracious manner, reverted to our former topics, and sat in my small room for half an hour, as if to convince me that my want of fortune made no difference in his esteem. A slender tribute to the literature he had loved and served so well, was accorded to him in the old age to which he attained, by the gift of a sinecure in the Exchequer of about 200*l.* a-year, connected with the custody of the Records; and the last time I saw him he was heaving an immense key to unlock the musty treasures of which he was guardian—how unlike those he had unlocked, with finer talisman, for the astonishment and alarm of one generation and the delight of all others."

Of Mr. Barnes, the well-known editor of the *Times*, it is stated:—
"Mr. Barnes combined singular acuteness of understanding with remarkable simplicity of character. If he was skilful in finding out those who duped others, he made some amends to the world of sharps by being abundantly duped himself. He might caution the public to be on their guard against impostors of every kind, but his heart was open to every species of delusion which came in the shape of misery. Poles—real and theatrical—refugees, pretenders of all kinds, found their way to the *Times*' inner office; and though the inexorable editor excluded their lucubrations from the precious space of his columns, he rarely omitted to make them amends by large contributions from his purse. The intimate acquaintance with all the varieties of life forced on him by his position in the midst of a moving epitome of the world, which vividly reflected them all, failed to teach him distrust or discretion. He was a child in the centre of the most feverish agitations; a dupe, in the midst of the quickest apprehensions; and while, with unbending pride, he repelled the slightest interference with his high functions from the greatest quarters, he was open to every tale from the lowest which could win from him personal aid. Rarely as he was seen in his later years in Lamb's circle, he is indelibly associated with it in the recollection of the few survivors of its elder days; and they will lament with me that the influences for good which he shed largely on all the departments of busy life, should have necessarily left behind them such slender memorials of one of the kindest, the wisest, and the best of men who have ever enjoyed signal opportunities of moulding public opinion, and who have turned them to the noblest and the purest uses."

Of Coleridge:—

"The mind of Coleridge seemed the harbinger of the golden years his enthusiasm predicted and painted;—of those days of peace on earth and good will among men, which the best and greatest minds have rejoiced to anticipate—and the earnest belief in which is better than all frivolous enjoyments, all

worldly wisdom, all worldly success. And if the noonday of his genius did not fulfil his youth's promise of manly vigour, nor the setting of his earthly life honour it by an answering serenity of greatness—they still have left us abundant reason to be grateful that the glorious fragments of his mighty and imperfect being were ours. Cloud after cloud of German metaphysics rolled before his imagination—which it had power to irradiate with fantastic beauty, and to break into a thousand shifting forms of grandeur, though not to conquer; mist after mist ascended from those streams where earth and sky should have blended in one imagery, and were turned by its obscured glory to radiant haze; indulgence in the fearful luxury of that talismanic drug, which opens glittering scenes of fantastic beauty on the waking soul to leave it in arid desolation, too often veiled it in partial eclipse, and blended fitful light with melancholy blackness over its vast domain; but the great central light remained unquenched, and cast its gleams through every department of human knowledge. A boundless capacity to receive and retain intellectual treasure made him the possessor of vaster stores of lore, classical, antiquarian, historical, biblical, and miscellaneous, than were ever vouchsafed, at least in our time, to a mortal being; goodly structures of divine philosophy rose before him like exhalations on the table-land of that his prodigious knowledge; but, alas! there was a deficiency of the power of voluntary action which would have left him unable to embody the shapes of a shepherd's dreams, and made him feeble as an infant before the overpowering majesty of his own! Hence his literary life became one splendid and sad prospectus—resembling only the portal of a mighty temple which it was forbidden us to enter—but whence strains of rich music issuing 'took the prisoned soul and lapped it in Elysium,' and fragments of oracular wisdom startled the thought they could not satisfy.

"Hence the riches of his mind were developed, not in writing, but in his speech—conversation I can scarcely call it—which no one who once heard can ever forget."

But it is now time to draw this long review to a conclusion, and we do so with the affecting close of the author:—

"Contrary to Lamb's expectation, who feared (as also his friends feared with him) the desolation of his own survivorship, which the difference of age rendered probable, Miss Lamb survived him for nearly eleven years. When he died, she was mercifully in a state of partial estrangement, which, while it did not wholly obscure her mind, deadened her feelings, so that as she gradually regained her perfect senses, she felt as gradually the full force of the blow, and was the better able calmly to bear it. For awhile she declined the importunities of her friends that she would leave Edmonton for a residence nearer London, where they might more frequently visit her. *He* was there, asleep in the old churchyard, beneath the turf near which they had stood together, and had selected for a resting-place; to this spot she used, when well, to stroll out mournfully in the evening, and to this spot she would contrive to lead any friend who came in the summer evenings to drink tea and went out with her afterwards for a walk. At length, as her illness became more frequent, and her frame much weaker, she was induced to take up her abode, under genial care, at a pleasant house in St. John's Wood, where she was surrounded by the old books and prints, and was frequently visited by her reduced number of surviving friends. Repeated attacks of her malady weakened her mind, but she retained to the last her sweetness of disposition unimpaired, and gently sunk into death on the 20th May, 1847.

"A few survivors of the old circle, now sadly thinned, attended her remains to the spot in Edmonton churchyard, where they were laid above those of her brother. With them was one friend of later days—but who had become to Lamb as one of his oldest companions, and for whom Miss Lamb cherished a strong regard—Mr. John Forster, the author of 'The Life of Goldsmith,' in which Lamb would

have rejoiced, as written in a spirit congenial with his own. In accordance with Lamb's own feeling, so far as it could be gathered from his expressions on a subject to which he did not often or willingly refer, he had been interred in a deep grave, simply dug, and walled round, but without any affectation of stone or brickwork to keep the human dust from its kindred earth. So dry, however, is the soil of the quiet churchyard, that the excavated earth left perfect walls of stiff clay, and permitted us just to catch a glimpse of the still untarnished edges of the coffin in which all the mortal part of one of the most delightful persons who ever lived was contained, and on which the remains of her he had loved with love, "passing the love of woman, were henceforth to rest;—the last glances we shall ever have even of that covering;—concealed from us as we parted by the coffin of the sister. We felt, I believe after a moment's strange shuddering, that the re-union was well accomplished; and although the true-hearted son of Admiral Burney, who had known and loved the pair we quitted from a child, and who had been among the dearest objects of existence to him, refused to be comforted,—even he will now join the scanty remnant of their friends in the softened remembrance that 'they were lovely in their lives,' and own with them the consolation of adding, at last, 'that in death they are not divided!'"

Posthumous Works of Dr. Chalmers. Edited by W. Hanna, LL.D. Vol. IV. Edinburgh: Sutherland & Knox. London: Hamilton, Adams, & Co. This volume contains the Sabbath Scripture readings, and embraces the whole of the New Testament. Fervent piety and absolute faith are the true characteristics of them all; and we find more unmixed Christian instruction pervading the exhortations than when the historical and ritual matter of the Old Testament occupied the thoughts and pen of the venerable writer. The date of the first reading, on Matthew, is October, 1841; of the last, on Revelation, 20th September, 1846, so that these are the musings, ideas, self-examinations, resolves, and prayers of five years. The beauties of every page show the intense religious feeling which, amid every thing of this world, animated the heart and soul of Dr. Chalmers; but we add only a few of the concluding lines for a Journal so miscellaneous and little theological as ours:—

"Give me, O Lord, to acquire the character of heaven now, that I may be found meet for heaven hereafter. May I cease to be impure; may I cease to be selfish—for of this latter vice I am making larger discoveries every day, and must struggle for its eradication. O in opposition to these may I henceforth become a righteous and holy creature; and let no artificial orthodoxy overbear the authority of the sayings—that Christ will reward and give to every man according to his work, and that they are they who do the commandments who have a right to the tree of life.—My God, save me from the doom of those who are without; save me from their vices now, that I may have no part in that dreary and everlasting exile in which they are to spend their eternity. Give me to be solemnized by this message from the Lord Jesus, the root and offspring of David, the bright and morning star. O let me no longer hold out against the invitations of a free gospel, but freely take of that water of life which is there offered so freely and unto all. Let Thy Bible, O God, be henceforward my supreme directory; nor let me incur the condemnation of those who either add to its words or take away from them. Come quickly, Lord Jesus; and to prepare me for this coming, let Thy grace be abundantly bestowed and Thy power ever rest upon me. In the attitude of habitual service and of habitual supplication, would I wait for Thy coming to our world; and O do Thou forgive the error and bless the fruit of these scriptural devotions on the New Testament, now brought to a close."

The Divine Origin and Obligation of Marriage. A Sermon Preached in St. Stephen's, Walbrook. By the Rev. G. Croly, LL.D. Kendrick. Wm seldom meddle with sermons; but the intro-

ductory notice to the present publication is so pertinent to the times, and so striking altogether, that we cannot deny ourselves the satisfaction of waiving it to many a place and person where pamphlets cannot readily find their way:—

"It appears" (says the eloquent Dr. Croly) "to be the growing impression of many able and experienced minds, that the present period demands peculiar exertion on the part of the Established Church. While every day generates some new peril to all the great Institutions of States, every day must make a new call upon the protective powers of society. The profession of the Clergy, their education, and their ample means of ascertaining the effect of laws upon the people, make those calls imperative upon them in the highest degree.

"The only question can be, how their answer may be most effectual. The Pulpit, with all its acknowledged influence, is evidently limited; Public meetings are necessarily rare; the Legislature itself gives but the results of opinion; it clothes the public sentiment; it does not originate, it cannot create. Publication alone is unlimited; open to all; creative. Let there be light. The wish is next to the possession."

"There are, probably, fifteen thousand Clergy in the Establishment; each of them has a circle of his own; and each who will thus use his leisure may awaken that circle. To do this requires no eminent ability. Sincerity was never in want of language. Plainness itself is power. The heart of an honest man transpires through his pen, and illumines his page.

"Brief appeals, simple Tracts, clear statements of principles, may, under the Divine blessing, be the most triumphant means of truth—the stone and the sling in the shepherd's hand, but capable of smiting the colossal adversary through helm and habergeon. Five Tracts, or fifty, may fail, on the most important subject. But five hundred will not fail, and five thousand would overthrow any measure of evil, or carry any measure of good, that could be proposed to a rational people.

"It is thus, that the Clergy can most effectually minister to the great necessity of the time, the true education of the people. This duty is not to be done, simply by teaching the rudiments of language or morals to infancy. The time presses. We must grapple with adults. Before the infant generation will take its place in the world, society may be swept away. We might as well wait for the growth of a young tree, to shelter ourselves from the tempest that is descending on our heads.

"The office of the clergy must be, to instruct the mature population in the great objects which comprehend every condition; to supply them with a 'reason of the hope that is in them,' to give them the primal principles of action; to rescue them from the false knowledge, which can only excite vanity, or embitter discontent; and to give them that knowledge, at once solid and safe, which will make them good subjects, good husbands, good fathers, and, as the source and security of all, good Christians.

"The purpose of those suggestions is not to make the Clergy a host of pamphleteers, but to mark the especial means of producing a salutary effect upon the nation. The people of England, above all others, fond of inquiry, eager for evidence, susceptible on all the great interests of religion and order, and whose will ultimately shapes all law, cannot be ruled but by the understanding.

"The Church requires no new powers. She has only to exert those which she possesses already. The people are well affected to her; but she can maintain her rank only by her reason. Of all the faculties which God has given to man, intelligent zeal is the noblest. The distinguishing qualities of a Church which is to guide this nation, must be vigilance and vigour. The country in our day feels but little homage for virtue which lives only in tradition, and heroism sealed in the tomb. It must look on the living figure of virtue; on Religion, in its quenchless integrity and sacred ambition of good. The Church of England must be, like the

seraphim in the vision of the prophet, all eyes and wings."

The sermon itself is the first of a cheap series wherein the preacher means to inculcate the leading principles of religion and society. We need not say it is a very able discourse.

Travels in British Guiana in 1840-1844, by command of his Majesty the King of Prussia. By Richard Schomburgk. With the Flora and Fauna of Guiana by Müller, Ehrenberg, Erichson, Klotzsch, Troschel, Cabanis, and others; accompanied by Views, and a Map of British Guiana, by Sir Robert Schomburgk. Leipzig: Weber. 1847.

These are not the times in which literary works are appreciated in Germany. Amid the din of arms and political discussions, literature and science have been silenced even in the aula and the lecture-room. It is, however, impossible that this should be of long continuance; the Germans have a native love of research, and literature, as the result of research, is their element; a reaction, therefore, must inevitably take place, and there can be no question that so soon as the public affairs are more settled, a fresh impetus will be given to the products of the press, and the labours of men of learning and enterprise meet with that encouragement which is their need.

The work of Richard Schomburgk will not fail to be appreciated when things are quiet; the scientific results of his explorations in Guiana have been very great, and he has brought back unusual treasures in ethnography, botany, and zoology. The favourable circumstances attending his travels greatly increased the energy and the success of the young naturalist. He accompanied his elder brother, Sir Robert Schomburgk, in his first journey to South America, in 1835—1839. At that time, he attracted the notice of the literary men of Germany, and especially of Alexander von Humboldt, and when the British Government confided to Sir Robert the important mission of determining the boundaries of British Guiana, in 1840, at Humboldt's suggestion the Prussian Government decided that Mr. Richard should again accompany his brother with an annual salary of 800 rix dollars. This sum would have been quite inadequate to meet the expenses of his undertaking, but by the liberality of Sir Robert, to make excursions and to purchase specimens of the most rare and splendid kinds in the various departments of natural history. It is true that many have been lost or damaged, but he has brought home an unrivalled collection, which has been placed in the Royal Museum. Among the plants are rare and perfect specimens of 1784 different species, in 4702 specimens; 78 species of fruit, dried, in 195 specimens; 161 fruits, preserved in salt-water and spirits of wine, in 256 specimens; three flowering palm branches, and 39 sections of stems for physiological investigation. He succeeded in the cultivation of five palms and thirty orchids of the rarest and most valuable species; indeed, the botanical collection is unequalled, having been selected with discrimination and care on many spots that have never been trod by the foot of a European.

The account of his travels is extremely interesting and instructive. He looks at men and matters with an unprejudiced eye, and expresses himself in a natural, simple manner. There is a completeness also in his observations, evidently the result of close investigation. The book is interesting, not merely to the man of letters and of science, but will be read with avidity by an extended circle. The scenes and the events, indeed, are well calculated to excite attention. The residence of the author in London, the voyage to British Guiana, Georgetown, the social relations of the colonial inhabitants, the expedition to the mouths of the Orinoko and Essequibo, and the interior of the country, the adventures and dangers of the travellers, the Indian tribes of Guiana, and lastly, the splendid tropical climate and luxurious vegetation—these altogether form the rich and abundant materials which our author has worked up with skill and care. The illustrations by Sir Robert Schomburgk and the beautiful maps are a great addition to the work.

ARTS AND SCIENCES.

THE BRITISH ASSOCIATION: SWANSEA.

THE Literary Gazette has, since the beginning of these annual meetings, given an historical and popular view of them, as well as a report of all their scientific proceedings which were worthy of record. Pursuing, therefore, its old plan, we have to say of this Swansea Congress, that it need fear comparison with none which have preceded it, as regards the hospitable reception of its visitors, the general accommodations for the business brought forward, and the pleasures attendant upon the intercourse between the enterprisers and the entertained. We have nowhere seen nor partaken of a more cordial and satisfactory welcome. Several of the country gentlemen around have had their houses full of guests, and the corporation and town have vied with them in attentions to the members. On Friday evening the beautiful grounds and mansion of Mr. Vivian were thrown open to all comers; and, after enjoying the promenade, they were ushered to a supper-room, where a plentiful repast à la Luculle was kept ever renewing before them. On Saturday the day was devoted to three excursions—one by boat to the caves and cliffs of the Promontory of Gower, the cave bones and other fossil remains (i.e. from Bacon Hole and from beneath the bed of the Tawe) of which had been brought under the notice of the Geological Section on the day before by Mr. Bate C. Spencer; two others, consisting of some 150 or 170 individuals of both sexes, wended on their way up the Swansea valley to Pontardawe, where they parted, the larger party proceeding to examine the Xestalyfera iron furnaces, and the other to see the ruins of Cerrig Cennen Castle, through Cwn Amman, a drive of much picturesque interest. At the furnaces everything was shown and explained to their curious and inquisitive questioners by Mr. J. Palmer Budd and the Messrs. Bevan, the former being the intelligent gentleman whose valuable experiments on the application of gases, as will be seen by our report, form one of the most striking features of the meeting, and prove the importance of the British Association as a stimulant to local enterprise and the development of useful improvements. The Cerrig Cennen body on their way inspected the Anthracite colliery of Mr. Joseph Martin, worked by the Messrs. Morgan, and the geologists were busy with their hammers on rock and coal, filling their bags with specimens of rarity and worth, particularly to the foreign gentlemen (from Austria and Holstein) who attached themselves to this division. The picnic provision for both was abundant, and the *al fresco* went off with great éclat. Besides the chartered conveyances, private carriages were liberally furnished, and their owners contributed largely to the pleasure of the holiday.

According to the order of Richard III.—pleasure first and business afterwards,—we now revert to the Sectional doings.

Sectional business, to which four days only have this year been devoted, has been extremely tight both in quantity and quality. With few exceptions and reports of progress, nothing of novelty or interest has been brought forward. Recording, however, as usual, the titles of all the papers read, the many omissions of detailed account must be attributed to our discernment, and our readers must believe that in our selection we have exercised a judgment always alive to their progress, and to their being in possession of the facts of advancement in science; but likewise anxious to exclude the chaff, to avoid repetitions, and to eschew the appearance only of being deep in the mysteries of science.

THURSDAY.

- SECTION A.—(Mathematical and Physical Science.)
1. Mallet (Robert), notice of reports on earthquakes and the seismometer.
 2. Powell (Prof.), a catalogue of luminous meteors, from September, 1833, to July, 1845.
 3. Powell (Prof.), observations of the annular eclipse of October 3, 1847.
 4. Powell (Prof.) on a new case of interference of light.
 5. Powell (Prof.) on an explanation of the "beads" and "threads" in annular eclipses.
 6. Harrison (Mansfield) on a self-registering thermometer, with twelve months' tracings of its work.

7. Roberts (George) on a remarkable tide in the Bristol Channel, Friday, 7th July, 1848.
8. Rankin (Rev. Thos.) on the recurrence of the November atmospheric waves at Huggate, from 1840 to 1848.

Lord Wrottesley opened business by briefly alluding to the objects of the Association, which, however, he considered too well known to require any lengthened explanation from him. He named them as—first, to collect together various materials for scientific investigations and facts of observation and experiment for record; secondly, to collect funds to promote inquiries in the several branches of science; and thirdly, to interest local inhabitants in scientific pursuits.

1. Mr. Mallet's "ad interim report" was occasioned by ill health, and it was therefore a mere brief formal notice of promise for next year.

2. Professor Powell's catalogue of luminous meteors (communicated by the secretary, as also the three following papers) was an elaborate collection of tables and reports of meteors observed in years subsequent to Quetelet's catalogue, and a condensed view of existing observations. Doubtless, it was remarked, many additions may be made to it, and further notices for embodiment were requested. The memoir contained also various manuscript letters and extracts from papers, a few of which were read. One, from the Mediterranean, particularly referring to the smell of sulphur and to blue lights observed on the sea. The record was, that after it fell calm an overpowering heat and smell of sulphur—blue balls visible.

3, 4, 5. The records of the annular eclipse afforded no information additional to what we have already given, excepting a statement that at Bombay, just before the annulus was completed, a faint light outside the cusp was observed, and that "beads were seen;" and Dr. Forster's notice of a luminous arc, differently coloured to any of the surrounding light, which lasted many minutes, and which he was inclined to attribute to a lunar atmosphere. The "beads" Professor Powell explains by the theory of interference. Sir D. Brewster refers them to the eye of the observer, to the telescope, or to the state of the atmosphere.

Sir W. Snow Harris offered a few remarks on the first memoir. He said many phenomena like the one mentioned as seen in the Mediterranean are on record. The old account of the ship Montague was long considered a traveller's tale; it was nevertheless true. A ball of blue fire, as large as a millstone, rolled along the water towards the ship, exploded, and carried away her top-mast. It came from windward, and nearly at the same rate as the wind. The explanation of the phenomenon Sir William considers to be what Faraday terms the glow discharge. The thunder cloud moving over the water, throwing off its electricity by the glow discharge until the distance between the cloud and the sea was diminished by the mast, the striking distance obtained, and the whole discharge effected. At Helstone, in Cornwall, a similar phenomenon was observed; the blue ball coming down the river like a lighted tar barrel passing seaward, the wind being off the land.

6. The principle of Mr. Harrison's thermometer was described to be the difference of the contraction and expansion of different metals—cast-iron and hard rolled copper in the present instance. A book of registries, or rather of the tracing of the instrument, was submitted.

Professor Lloyd asked whether the observations had been compared with other thermometric measurements, and it not appearing that such comparison had been made, he expressed a want of confidence in the mode of registry, as metallic expansions occurred by starts or jumps at the points of contact.

Mr. Stokes observed no indications of starts in the registries, and the instrument appeared to have worked equally.

This subject led to the mention of the aneroid barometer, the fluidless instrument, which was described by Professor Lloyd, but of which a full account appeared first in our columns.

8. Mr. Rankin's records accord, during the whole period, with Mr. Birt's observations, and add to

the evidence of the transit of the great November wave.

SECTION B.—(Chemical Science, including its application to Agriculture and the Arts.)

1. Schunck (Dr. Edward), report on colouring matters.
2. Hunt (Mr. Robert), report of progress of the investigation of the influence of carbonic acid on the growth of ferns.
3. Ward (Mr. W. S.), on a galvanometer.
4. Exley (Rev. Thos.), on the motion of the electric fluid along conductors.

1. When finely-ground madder roots are treated with hot water, a brown liquid is obtained, having a sweetish-bitter taste, in which acids produce a dark brown precipitate. Dr. Schunck, in his former reports, described this precipitate as consisting of six substances—viz. two colouring matters, two fats, pectic acid, and a bitter substance. To these he now adds a seventh—a dark brown substance, which remains behind when the other substances have been removed by means of boiling water and alcohol; it is soluble in caustic alkalis, with a dark brown colour, and seems to be the substance to which the colour of the dark brown precipitate is due. Dr. Schunck considers it to be oxidized extractive matter. He has also come to the conclusion, that there is only one colouring matter contained in madder—namely, alizarin. The other substance which he took for colouring matter in the first instance, and which he called vulcrin, he now considers no colouring matter at all. He believes, also, that the two substances which, in his first report, he called fats, are not fats, but resins. Of these resins, the more easily fusible one, which dissolves in a boiling solution of perchloride or permanganate of iron, he calls alpha-resin, and the other opposed to it in these conditions, beta-resin. The method of preparing them is the same as that described in Dr. Schunck's former report. The dark brown precipitate produced in a decoction of madder by acids is now therefore considered to consist of alizarin, vulcrin, alpha-resin, beta-resin, vulcrin, pectic acid, and oxidized extractive matter. The reasons for the new views, general observations on the subject, and further details concerning the properties and composition of the above substances extracted from madder, also as to the part they play in the process of madder-dyeing, constituted a voluminous report.

2. This communication was merely a report of the progress which has been made by a committee appointed at Oxford to investigate this question. The experimental part of the inquiry has fallen into the hands of Dr. Daubeny and Mr. Hunt. Mr. Hunt described the arrangements which he had adopted in his experiments, and stated, that the only result at which he had as yet arrived was, that ferns would bear a larger quantity of carbonic acid if they were gradually habituated to it, than they would when it was administered at once. Ten per cent. in excess over the quantity found in the atmosphere was found to act most injuriously if administered in one dose; but if we began by giving two per cent., and gradually increased the quantity, the plants did not appear to be at all affected.

Some conversation followed this communication, in which it was argued that it would be important, if practical, to try the experiments on a larger scale, and adopt some more effective arrangements for supplying the carbonic acid, and for examining the gases after the plants have breathed them for some time.

4. Professor Wheatstone's experiments, showing that in traversing a long conductor, the electric spark occurs at the same time at each end of the circuit, and latest at some part of the middle, have been considered, Mr. Exley states, as a proof that there are two electric fluids; but this conclusion is, in his opinion, too hasty, "for the phenomena ought to be such on the supposition of a single fluid." According to Mr. Exley, when an electrical charged plate is discharged, there are only three ways worthy of notice by which the equilibrium can be restored. 1st. The passage of the fluid through the circuit commencing either at the positive or negative end. 2nd. Its passage impulses beginning at one or the other end. 3rd. Its passage impulses taking their rise simultaneously at both ends and closing about the middle.

The phenomena of charging an electric plate, and its discharge, were then treated, to prove that on the supposition of only one electric fluid the spark ought to be seen precisely at the same time at the two extremities, and latest of all about the middle of the rod.

SECTION C.—(Geology.)

1. Buckman (Prof. James), remarks on the plants of the "insect limestone" of the lias formation.
2. Buckman (Prof. James), notice of the discovery of some apicaceous remains in the lias of Gloucestershire.
3. Ibbetson (Capt. L. L. B.), on the position of the chloritic marl, or phosphate of lime bed in the Isle of Wight.
4. Hopkins (Evan, Esq.), on the polarity of cleavage planes, and their influence on metalliferous deposits.
5. Struvé (William Price, Esq.), on the great Anticline from Newbridge, in the Taff Valley, to Cefn Bryn, in Gower.

This section had an excellent theatre in the institute.

3. In this communication it is the intention of the author to point out the position of the chloritic marl or phosphate of lime bed in the Isle of Wight, in order that so valuable a manure, as well as the greater fertility of the soil on that stratum, may not be lost to the proprietors and farmers in the island, for the want of knowing the true position. It is the same bed alluded to some years ago by the author, and called chloritic marl; it is a grey marl, full of green grains of a silicate of iron and fine quartz sand. It is very fossiliferous. The following is a list of the fossils found in it in the Isle of Wight:—

Scyphia fittoni, *holaster nodulosus*, *spongiae meandrioides*, *siphonia agariiformis*, *discoidea subuculus*, *caryophyllus carinatus*, *terrebratula pectinis*, *terrebratula biplicata*, *terrebratula convexa*, *lima elongata*, *pleatula inflata*, *pecteus 5 costatus*, *pecteus asper*, *ostrea carinata*, *pholias*, *avellana cassis*, *solarium ornatum*, *natia Galitina*, *pyrala Smithii*, *nautilus*, *bauciles*, *turritiles Bergeri*, *ammonites splendens* (abund.), *ammonites varians*, *ammonites monile*, *ammonites tuberculatus* (abund.)

The upper part of the bed forms in some places a conglomerate of pebbles and small boulders, and the fossils are broken as if rolled on a beach. The lower beds contain the fossils whole, and appear to have been formed in still water. *Ammonites varians*, *ammonites splendens*, and *scaphites striatus*, are the most characteristic fossils; but it also contains abundantly nodules of a coprolitic form, which my friend Mr. Thomas Hethington Henry has kindly examined, and finds they contain a large per centage of phosphate of lime.

Mr. Austin mentions it being found near Guilford; and Mr. Nesbit has found it near Fareham, containing in the nodules 25 per cent. of phosphate of lime, and in the whole mass 2 to 3 per cent. Mr. Morris and the author have also found the chloritic marl very abundant at Chaldon, near Lulworth, and also in the Railway cutting of the Wilts and Weymouth Railway, at Holywell.

The following fossils were obtained from these localities:—

Caryophyllia, *holaster subglobosus*, *discoidea subuculus*, *salenia*, *caryophyllus*, *serpula*, *ammonites tuberculatus*, *ammonites varians*, *ammonites Rhotomagensis*, *ammonites Mantellii*, *ammonites splendens*, *nautilus Deolongchampiensis*, *nautilus* (two or three species), *avellana cassis*, *pleurotomaria gurgitis*, *arina*, *lucina*, *arca*, *neera*, *venericardia*, *myocœna cretacea*, *lithodomus*, *terrebratula lyra*, *terrebratula subundata*, *terrebratula regulosa*, *terrebratula striatula*.

The strata at Chute farm is of chloritic marl, but the fossils are more numerous and varied. The general position of the chloritic marl in the Isle of Wight, and the farms that it is found upon, are as follows:—From Compton Bay along the south slope (adjoining the chalk marl) of Shalcomb, Mottestone, Brixton, and Lamberstone Downs, near the farms of Compton, Coomb, Rancomb, Northcourt, Shorwell, Chillerton, between Chale farm and Chillerton Down, largely

* Note by Professor E. Forbes.—Hitherto no species of *neera*, so far as I am aware, has been found in cretaceous strata. Captain Ibbetson discovered a species of *neera* in the colitic rocks, and several are known in the tertiary and recent formations. This cretaceous form supplies the deficient link in the series of *neera* in time.

developed near Gatecomb, between New Barn and Gaissons on the Biddle Road and hill between Gaissons and Carisbrook, a great thickness on the road from Mount Joy to Whiteomb, near the farms of West Standen, Sullons, and Arreton, the south slope of Arreton, Messley, Ashley, Brading, and Bembridge Downs, near the farms of Messley, Grove, Upper Martin, and Yaverland; and runs into the sea near the Culver Cliff. It is also found on Shanklin, St. Beniface, Kew, Week, Apulkercomb, St. Catherine's and Niton Downs; at the top of the Undercliff, Ventnor, Chute near Steep Hill Castle, in large blocks on the sea shore, and also near the farms of Shanklin, Looeomb, Wroxhall, Winsor Span, Kew, Week, Dean, Little Stenbury, Sheep Wash, Niton, and Chale, always immediately under the chalk marl, and separating it from the upper green sand. This chloritic marl or phosphate bed may be applied with great profit on the adjacent arid ferruginous sandy soil, so common and unproductive in the centre of the south side of the island—viz., at Brixton, Chale, Kingston, Godshill, Newchurch, Bleak Down, Rookley, Queen's Bower, Sandyway, &c. &c.

The drift or gravel beds of the island on the north side, are composed of angular flints, very little water worn, and in some places perfectly sharp, and they are interstratified with a fine brown sand and marly brick earth. The sand and clays in which they are imbedded are the same; it has every appearance of being similar to the flint gravel in the neighbourhood of London, &c. &c.

The north side of St. George's Down is thickly covered with this gravel, but at the south end beyond the green sand and gault, there is a thick bed of very hard flint and chert conglomerate, strongly cemented with iron. It is stratified in places with zones of the broken ferruginous bands, of the upper beds of the lower green sand, on which strata it is reposing, and the sands and clays in which they are imbedded are debris derived from the lower green sand. The whole of the drifts in the centre of the south side are the same, but do not form conglomerates, but merely ferruginous flinty gravels, stratified with ferruginous sands.

It appears from the above that the drift beds on the north side are the debris derived from the flints of the chalk, and sands, and clays, of the tertiary series, and do not appear to have been accumulated on a sea beach, in consequence of the angular form presenting little evidence of their having been subjected to much attrition.

On the south side of the chalk range the drift has resulted from an admixture of chert and flints, probably from the upper green sand with the debris of the sands of the lower green sand, and appear to be local. The tops of the highest hills are not covered by this drift. On them we find only the angular or unrolled flints, without any intermixture of sand or clay.

The physical features of the island are curious, inasmuch as it does not appear there has been any uplifting agency employed to occasion the vertical sections of the cretaceous and tertiary series, (so well exposed on the east and west sides of the island, and also by the brick field at Newport;) for if that had been the case there must have been a considerable disruption and movement in the adjacent strata to the south—viz., the lower green sand, which is not the case, as they are inclined north north-west at a small angle, and very regular. The hills of St. Catherine's, Week Down, and Shanklin Down, and also the green sand hill separating Gatecomb from Carisbrook, are nearly horizontal; but as the upper green sand and chalk—the whole length of the Undercliff and the lower green sand at Looeomb and Atherfield—are at this day continually slipping, I conceive that the same must have been the cause of the vertical strata north of the Downs, and occasioned by the decomposition of the fullers' earth, and the abrasion of soft sandstone by currents of water.

The object of the observations by Mr. Struve was to describe the great central uprise of the coal measures in Glamorganshire, between the Vale of Taff and the Estuary of the Barry, in Carmarthen Bay;

mentioning also some of the governing features of the South Wales coal field, confining himself, however, principally to that portion of it situated between the Taff Valley and Carmarthen Bay. This district comprises Glamorganshire and portions of the counties of Carmarthen and Brecon, and occupies an area of about 560 square miles. It is intersected by six principal valleys, down which the mineral produce is conveyed by canal or railway to the several ports of Cardiff, Porthcawl, Port Talbot, Neath, Swansea, and Llanelly.

Sections are necessary to realize the observations; we can only therefore give the general conclusions as to the object of the observations—namely, that the great central uprise of this coal field, which has served so usefully to bring up the lower coal shales in various portions of it, is merely a continuation of what has acted with so much more violence in Gower; and that this movement may perhaps be traced back into Pembrokeshire, where, from the evidence afforded by Sir Henry De la Beche's valuable surveys, it appears that a great disturbance in the limestone and old red sandstone has also taken place.

The South Wales coal field was shown to contain enormous mineral wealth. One section, for instance, exhibited 57 feet thick of workable coal; 60 inches of workable argillaceous mine; and from 18 to 36 inches of black band, all within an attainable depth, averaging a distance by the Taff Vale Railway of about twenty miles from the port of Cardiff. One square mile of such a coal field ought to produce, according to ordinary calculations, 40,000,000 tons of coal, 8,000,000 tons of mine, and 3,000,000 tons of black band.

The Swansea section contained the coal measures above the Pennant Rock, which may be estimated at 25,000,000 tons of coal per square mile; and to this may be added the last estimate for the coal and mine below the Pennant, which is available for many square miles at the tops of the valleys, where they are found to crop out in proximity with the limestone, and on which all the great iron works of South Wales are established. The extent of coal field, therefore, which may be considered available chiefly to the ports of Swansea and Cardiff, may be estimated at about 400 square miles. The South Wales Railway will pass at the foot of all the valleys, so that on its completion the whole extent of this country will be in a condition, with the aid of short branches, to send its produce to either of these ports.

As regards the qualities of the coals, they may be classed in the following order—Bituminous coal, free burning coal, culm, anthracitic culm, anthracite, for all of which there is an extensive consumption. The bituminous and free burning coal appear to occupy the largest portion of the coal field, and the anthracite and anthracitic culm the least. The anthracite commences slightly at Hirwain, and increases as it advances into Carmarthenshire; and in Pembrokeshire the whole of the coal field partakes of that quality. The other qualities take a similar direction, and gradually and imperceptibly pass into each other till they become bituminous coals on the south side of the coal field.

SECTION D.—(Zoology and Botany.)

1. Jeffreys (J. G.) on the recent species of *Odostomia*, a genus of gastropodous mollusks, inhabiting the seas of Great Britain and Ireland. Illustrated by specimens.
2. Reeve (Lovell) on a new species of argonauta, with some observations on the animal of *A. Gondola*. Dillwyn.
3. Lankester (Dr.), report of committee on the registration of periodic phenomena.
4. Blackwall (John), birds observed in the years 1847 and 1848.
5. Hancock (Albany) on the boring of mollusca into rocks, and on the removal of portions of their shells.
6. Forbes (Prof. E.) and McAndrew (Robert) on some marine animals from the Bristol Channel, with living specimens.

The room for this popular section, unlike the chemical apartment, was too small, and Section A kindly changed places with it on the following days.

2. Among the argonauts captured by Sir Edward Belcher, during the expedition of H.M.S. Samarang to Borneo and the Eastern Archipelago, are two species, one entirely new, distinguished by its compressed growth and by the elevated structure of the

lateral wrinkles, for which the name *A. Owenii* is proposed. The other was regarded, of interest on this occasion, as being the recognition of a lost species, *A. Gondola*, described upwards of thirty years since by the president of the section, Mr. Dillwyn, whose "Descriptive Catalogue of Shells" was still an important authority in reference to the synonyms of early writers. Mr. Reeve had identified the species in the most satisfactory manner by a comparison of specimens in different stages of growth, collected by Sir Edward Belcher, in the Atlantic Ocean, between St. Helena and Ascension; and by Mr. Cumming, in the seas adjacent to the Philippine Islands, and the specific value of Mr. Dillwyn's species was further confirmed by observations on the animal, of which a drawing was exhibited, made by Mr. Arthur Adams, assistant-surgeon of the Samarang, from the living specimen at the time of its capture.

5. Of the many theories advanced to explain the nature of these operations, the author stated that the one most generally received is, that the animal works with the shell in the manner of a rasp or an auger; another theory, extensively believed, requires a solvent, particularly when the burrows are in calcareous rocks; and a third, which has received distinguished notice, was proposed by Mr. Garner in his well-known paper "On the Anatomy of the Lamellibranchiate Conchifera," published in the Transactions of the Zoological Society, which theory accounts for the phenomenon by the "vibratile action of the parts exciting constant currents of water against the substance, aided by its impetus when drawn in down the elongated body of the animal, and in some cases, perhaps, by the rasping of the valves." The facts and reasons were then given which induced Mr. Hancock to consider these generally received theories insufficient to account for the operations of the stone and wood-boring mollusks. Mr. Hancock is of opinion that the anterior portion of the animal is the excavating instrument. This in *Teredo* and *Pholas* is composed of the root and edges of the mantle, which together entirely fill up the frontal gape of the shell. In *saxicava* and *gastrochaena* it is formed wholly of the edges of the mantle, which are united and thickened. Other peculiarities of the anterior portion of the boring mollusks were described, and that this portion of the animal corresponds in form to that of the bottom of the excavation was shown; and further, that the anterior parts of the animal are furnished with the means of removing the various substances into which the burrows are made. An examination of these parts under the microscope confirmed Mr. Hancock in his opinion, and disclosed to him what he considers the real cutting surface. He says, the surface of the foot of the *Teredo norvegica*, when preserved in spirit, is tough and coriaceous, and is entirely covered with little irregular pimples. If a portion of it be placed in the compression of the microscope, it is perceived to be crowded with minute, brilliant points; and on increasing the pressure, comparatively large imbedded crystalline bodies are revealed. They are very numerous, and of various sizes and shapes, chiefly five and six sided, but not by any means regularly so; they all agree in having one or more elevated points near the centre. It was these points apparently that were seen in the first instance shining on the surface. These bodies are highly refractive, and are for the most part pretty regularly distributed over the whole convex surface of the foot, but all occasionally congregated into masses. Similar crystalline bodies are likewise imbedded in the edges of the mantle surrounding the foot. In *Pholas* the same appearance is presented. When the anterior convex surface of the foot of a *P. crispata*, for instance, is removed and examined, with the aid of the compression, it is found to be studded over with minute dark spots, each emitting a brilliant point of light from the centre. On using a higher magnifying power, the whole surface is seen to be crowded with crystalline bodies—some dark coloured, others perfectly transparent, and resembling in shape and character those of *Teredo*—but most commonly drawn together into little bundles, and very

brilliant; they are sometimes, also, gathered together into considerable masses. These bodies, in some specimens, are quite colourless; but when of a dark reddish brown, which is not uncommon, they have at first sight a glandular appearance, especially when the imbedding tissue is a little thickened about them, which frequently happens. The dark spots of a glandular aspect observed by Professor Owen, in the outer dermoid layer of the mantle of *Clavagella*, may probably prove to be similar crystalline bodies. In *Saxicava rugosa*, *patella vulgata*, and others, Mr. Hancock has detected them. It is difficult to say what these crystalline bodies are composed of, though there can be little doubt that they are modified epithelium scales, from which they differ chiefly in being very robust, highly refractive, and brilliantly crystalline. The difference between these and ordinary epithelium scales will be at once recognised if a little of the surface of the lower portion of the siphonal tube of *Pholas* be examined in the compression. It appears, also, that, like the scales of epithelium, these bodies are constantly being shed. On testing with acids the scourings taken from the bottom of the burrow of *saxicava*, they were found to contain a vast number of these bodies, exactly corresponding with those of the mantle. And on examining the sediment adhering to the shell of *Gastropoda*, the residuum after the action of the acid had ceased was almost entirely composed of them. The reduced wood taken out of *Teredo* also contains brilliant crystalline bodies, resembling those in the foot and mantle. Whether these bodies, however, are epithelium scales or not, in this deciduous character is seen the means of keeping the rubbing surface in an efficient state. With pressure these bodies frequently break into sharp angular fragments. Acetic acid has no effect on them; and in *saxicava* strong nitric acid produces no change even after several days' immersion. If allowed to remain sufficiently long in this acid, the imbedding is destroyed, and the crystalline bodies, not in any respect altered, are left as a sedimentary residuum. Those of *Pholas* and *Teredo*, however, appear to be ultimately acted upon by this acid, though they resist the power for several hours, and are never totally destroyed by it. They become attenuated and brittle, but retain much of their brilliancy and sharp angular appearance. From these facts it perhaps may be inferred that these crystalline bodies are either entirely composed of siliceous or are a combination of it with animal matter. His experiments, the author said, certainly do not prove this, but when their results are taken in connection with the crystalline appearance of these bodies, and when we refer to the fact recently made known, that the spines of the tongue of the gastropods are composed of siliceous, a high degree of probability is established in favour of this view; and if it be correct, the phenomena attending the boring of the mollusks are very easily explained.

The foot and mantle of *Teredo*, *Pholas*, and *Patella*, and the thickened portion of the mantle of *Saxicava*, *Gastropoda*, and their allies, appear then to be rubbing discs of extraordinary power, crowded as they are with these siliceous bodies, which, penetrating the surface, give to it much the character of rasping or glass paper. And all that now remains to be proved is the existence of muscles to give this formidable cutting surface the necessary rubbing surface. These muscles, Mr. Hancock says, are amply provided.

Professor Owen, receiving Mr. Hancock's views with a certain degree of probability, cautioned him against too great a reliance upon analogies.

6. Professor E. Forbes exhibited living examples of the *velleta* and other animals, dredged by Mr. McAndrew and himself in the Bristol Channel, and noticed the occurrence of the rare medusae, *Willisia stellata* and *Turris coccinea*, in Swansea Bay.

SECTION F.—(Statistics.)

1. Balfour (Edward, assistant-surgeon Madras army), observations on the means of maintaining the health of troops in India.

2. Crawford (John), vital statistics of a district in Java; with preliminary notes, by Colonel Sykes, V.P.R.S.

3. Rime (Joseph, Esq., M.P., communicated by) on the

annual increase of property, and of exports and imports in Canada.

The papers on colonial statistics were of much interest. By a comparison of the number of deaths among the men and the officers, Colonel Sykes came to the conclusion that if similar treatment and moral care were taken of the former, the rate of mortality might be much diminished. The rest might be parliamentary returns.

[Having in former years given at great length the several papers by Professor Owen, convinced of the value of his researches, and that they would be welcomed by our scientific readers both at home and abroad, we have much pleasure in being enabled to keep up as it were the series, and submit this year the following paper, read at section D. on Friday, "On the Order of Development and Change of Dentition of the Kangaroos (*macropodidae*)," with remarks on the homologies and notation of teeth in general.]

Professor Owen referred to his "Odontology," in which the formula of the permanent dentition of the kangaroos was determined, and the differences which Cuvier had supposed to characterize the groups of the family, designated respectively *macropines* and *hadinaturus*, were shown not to exist in nature, the species of both groups having their grinding teeth developed in precisely the same number and manner, and differing only in the length of time during which certain of these teeth were retained.

The permanent formula was defined as—

$$i. \frac{3-3}{1-1} \quad c. \frac{0-0}{0-0} \quad p. \frac{1-1}{1-1} \quad m. \frac{4-4}{4-4} = 28,$$

the presence of germs of upper canines in the young of all kangaroos, and their development into small teeth in a few species, being also noticed.

The formula of the deciduous dentition was not given, nor the order of the development and shedding of the teeth described, certain stages not having been at that time determined to the author's satisfaction. Professor Owen has since acquired the requisite materials for tracing out each successive stage of the development and decadence of the molar series, but some further researches, he stated, were still required to determine the precise period of formation and shedding of the deciduous incisors.

Mr. Waterhouse, in his "Natural History of Mammalia," confirms the author's determination of the permanent formula of the dentition of the *macropodidae*, and abandons the Cuvierian formula of the *genus macropus*, but does not describe the deciduous dentition or its changes. When the great kangaroo (*macropus major*) quits the pouch, it has $i. \frac{1-1}{1-1}$, $m. \frac{2-2}{2-2} = 12$, i. e., one incisor and one molar on each side of both jaws. The incisor is $i. 1$ of the permanent series; the molars are $d. 3$ and $d. 4$, or the deciduous molars, corresponding to the last two in the hog and anoplothere; they are, consequently, only eight in number in the kangaroo, two on each side of both jaws.

About a month after permanently quitting the pouch, the second incisors, $i. 2$, cut the gum, and soon after the first permanent molars, $m. 1$. At four to six months after this time the dentition is $i. \frac{2-2}{1-1}$, $m. \frac{3-3}{2-2}$, the molars being $d. 3, d. 4, m. 1$, and $i. 3$; the large third incisor has begun to cut the gum.

At one year old (dated from quitting the pouch) the dentition is $i. \frac{3-3}{1-1}$, $m. \frac{4-4}{2-2}$, the molars being $d. 3, d. 4, m. 1$ and $m. 2$; the third incisor is now in place and the additional molar is the second of the permanent true molars.

The next stage is the shedding of $d. 3$ and the acquisition of $m. 3$; then $d. 4$ is shed, and succeeded by the single premolar of the permanent series, which displaces $d. 4$ vertically; finally, the last true molar comes into place, and, in *macropus major* the premolar is simultaneously shed. Thus four individuals of the great kangaroo may be found

to have the same numerical molar series, $m. \frac{4-4}{4-4}$ and

not any of them have the same or homologous teeth. The four grinders may be, for example:

$d. 3, d. 4, m. 1, m. 2$; or—
 $d. 4, m. 1, m. 2, m. 3$; or—
 $p. 1, m. 1, m. 2, m. 3$; or—
 $m. 1, m. 2, m. 3, m. 4$.

The complexity of the interchanges, and alternating sequence of this course of dentition, had compelled Professor Owen to omit a reference to it in his work; and to postpone any definition of the deciduous formula of the kangaroos until all the gradations of the dentition had been compared.

The order of dental development and change determined in the *macropus major* was not exactly that observed in some other, especially the smaller, species of kangaroo. In *macropus bennettii*, e.g., the acquisition of $m. 3$ is not accompanied by the shedding of $d. 3$. A skull of that species, five inches in length, had $m. \frac{4-4}{4-4}$, being $d. 3, d. 4, m. 1, m. 2$, and $m. 3$: this was determined by the exposure of the premolar and the last molar ($m. 4$) still in the substance of the jaw. Both deciduous molars are displaced by the premolar, which is relatively larger than in the *macropus major*; and at the same period, the last true molar cuts the gum. But the acquisition of this tooth is not accompanied by the shedding of the premolar, so that the mature dentition shows five grinders on each side of both jaws, which are $p. \frac{1-1}{1-1}$, $m. \frac{4-4}{4-4}$.

Thus, the total number of molar teeth developed in the kangaroo is 28; consisting, on each side of both jaws, of 2 deciduous molars; 1 premolar, and 4 permanent molars.

The deciduous molars are the homologues of those in the human subject; the premolar is the homologue of the second bicuspids; and the three anterior molars answer to the three true molars in man. The fourth molar in the kangaroo is a superadded tooth. With regard to the mammals, which have the typical number of premolars, e.g. *canis*, *sus*, the premolar of the kangaroo is homologous with the fourth premolar, and its proper symbol is $p. 4$, in the notation of the typical dental formula. The bicuspid of the human subject answer to the third and fourth premolars in the dog and hog, and their signs are $p. 3$ and $p. 4$.

Professor Owen concluded by urging the advantages of a definite formula and symbols for teeth, the homologues of which could be determined in so large a proportion of the mammalian class, according to the principles laid down in his "Odontology," pp. 514, 522.

The typical number of deciduous molars is $m. \frac{2-2}{2-2}$ (*Anoplotherium*, *paloplotherium*); their symbols, respectively, were $d. 1, d. 2, d. 3, d. 4$: the typical number of premolars is $p. \frac{1-1}{1-1}$; their symbols being $p. 1, p. 2, p. 3, p. 4$: the true molars are $m. \frac{3-3}{3-3}$ in the placental mammals, but $m. \frac{4-4}{4-4}$ in the implantals; their symbols being $m. 1, m. 2, m. 3, m. 4$. When the number of any of these three kinds of molars falls below the typical one, the missing teeth are from the fore part of the deciduous and premolar series, and from the back part of the molar or true molar series. In assigning the symbols to the teeth, the observer should begin with the last or posterior deciduous molar, making it $d. 4$, and the rest forward in succession, $d. 3, d. 2$, and $d. 1$, which is rarely present. So likewise with the premolars; that which is next to the first true molar, and which is the most constant, is $p. 4$, the next in advance, $p. 3$, and so on. These true molars must be notated from before backwards; that next the last deciduous molar, or last premolar, is $m. 1$; the second, $m. 2$; the third, $m. 3$; and the fourth, if present, as in the kangaroo and other marsupials, is $m. 4$.

In a few rare cases, *Phacochoerus*, e.g., the first true molar is shed before the last premolar, with which tooth the second true molar comes into contact; but it may be known to be $m. 2$, by being succeeded by the characteristic complex last molar, $m. 3$;

and also by tracing the progress of dentition. The typical number of incisors is $\frac{2-2}{1-1}$; they are counted from before backwards, and their symbols are $i. 1, i. 2, i. 3$: the number is exceeded only in certain implacental, (*didelphys, mylacinus, dasyurus, perameles, myrmecobius*—this latter genus has the molars also in excess.) True canine teeth are never more than $\frac{1-1}{1-1}$, and their symbol is c .

The different kinds of teeth are thus indicated by letters, i . incisors, c . canines, p . premolars, m . true molars; the corresponding deciduous teeth by the same letters with the prefix d , as $d. i$. deciduous incisors, $d. m$. deciduous molars, or d . alone where the molars are the subjects of comparison. The particular teeth of each kind are distinguished by numerals in the order above defined. Thus the formula of the human mature dentition is, $\frac{2-2}{1-1} c. \frac{1-1}{1-1} p. \frac{2-2}{1-1} m. \frac{2-2}{1-1} = 32$; and its notation, $i. 1, i. 2, i. 3, c., p. 3, p. 4, m. 1, m. 2, m. 3$; the series thus indicated being repeated on each side of both jaws. The teeth of the upper jaw may be distinguished by capitals, those of the lower jaw by small letters. The symbols should be used constantly with reference to the archetypal formula, not to the number of teeth in the individual examined. Thus when the homology of a tooth was determined and expressed by $p. 4$, it was not to be concluded that this was one of four premolars existing in the species, but that the tooth so symbolized—in the kangaroo, *c. g.*—answered to the fourth premolar in the typical series, as shown in the dog, hog, and the primate ungulate.

The substitution of signs for verbal definitions gives peculiar power to the algebraist, and shows the exactness of mathematical reasoning. To gain the like power for anatomical science should be the aim of its cultivators. The determination of the homologies of parts was the requisite preliminary step to this acquisition; and not the least of the advantages of a homological knowledge of a part, was the power of attaching to it, or representing it by, a symbol denoting it under all its modifications of form, and in all the varieties of animals in which it exists. Professor Owen illustrated the power and advantages of such symbols in anatomical propositions, by reference to the teeth. The homologous teeth being once determined, it then became possible to denote them by signs, and to show the quantity of information which might be compressed into small space by the use of the symbols he had proposed and exemplified in his communication. He gave the following example:

The permanent dentition of the *Anoplotherium* was, $\frac{2-2}{1-1} c. \frac{1-1}{1-1} p. \frac{2-2}{1-1} m. \frac{2-2}{1-1} = 44$: the deciduous dentition was, $\frac{2-2}{1-1} c. \frac{1-1}{1-1} d. m. \frac{2-2}{1-1} = 32$. $d. m. 1$ was succeeded by $p. 1, d. m. 2$ by $p. 2, d. m. 3$ by $p. 3, d. m. 4$ by $p. 4$. $m. 1$ was in place before the loss of $d. m. 1, m. 2$ was coincident with $p. 1$ and 2 ; next came $p. 3$, and then, coincidentally, $p. 4$ and $m. 3$.

The permanent dentition of the horse was— $\frac{2-2}{1-1} c. \frac{1-1}{1-1} p. \frac{2-2}{1-1} m. \frac{2-2}{1-1} = 40$: the deciduous dentition was $\frac{2-2}{1-1} c. \frac{1-1}{1-1} d. m. \frac{2-2}{1-1} = 32$: $d. m. 1$ was not succeeded by $p. 1$, this tooth not being developed; the other $d. m.$'s are succeeded respectively by $p. 2, p. 3$, and $p. 4$ — $i. c.$, by teeth answering to those so denoted in the *Anoplotherium*. In the dog, on the other hand, there are $p. \frac{2-2}{1-1}$, but only $d. m. \frac{2-2}{1-1}$. $p. 1$ is not preceded by a calcified $d. m. 1$, and the $d. m.$'s in use answer to $d. m. 2, d. m. 3$, and $d. m. 4$, in the horse and *Anoplotherium*. The permanent molars of the dog, $\frac{2-2}{1-1}$, answering to $m. 1$ and $m. 2$, in the upper jaw, and to $m. 1, m. 2$, and $m. 3$, in the lower jaw of the horse.

With regard to the human subject, of which the deciduous and permanent dentition was formalised above, the first milk-molar answers to $d. m. 3$ in the

dog, horse, &c., and is succeeded about the eighth year by a bicuspid tooth answering to $p. 3$; the second milk-molar, answering to $d. m. 4$, is succeeded, about the tenth year, by a bicuspid, answering to $p. 4$ in the typical dental series. The tooth $m. 1$ usually makes its appearance in the sixth year, and forms the third grinder of the child of that age; $m. 2$ comes into place between the twelfth and fourteenth years; $d. 1$ and 2 are before or about that time shed, and replaced by $p. 1$ and 2 ; $m. 3$ finally comes at or after the eighteenth year, whence it is called the "wisdom tooth."

The exposition of the foregoing anatomical particulars, by the ordinary language and verbal definitions of the teeth, as "first permanent spurious molar," "second deciduous molar," "third true permanent molar," "first deciduous incisor," "first permanent incisor," &c. &c., would occupy four or five pages of the type used in the well-known "Bell's Anatomy of the Human Body;" whilst by the substitution of the symbols $p. 1, d. 2, m. 3, d. i. 1, i. 1$, &c. &c., the exposition of the same particulars might be compressed, without any loss of clearness, into a quarter of a page. One disadvantage attending the tax upon the attention and memory in the detailed verbal descriptions was, that it tended to enfeeble the judgment in forming conclusions from the facts, and to impair the power of appreciating the results of the comparisons.

Professor Owen concluded by stating his conviction that nothing would tend more to influence the rapid and successful progress of the knowledge of the structure of animal bodies than the determination of the homologies of the different parts, and the denoting the parts so determined by single substantive names, and also by symbols. The bones might be denoted by simple numerals, as was proposed in his work "On the Archetype of the Skeleton." The teeth by a combination of letters and numerals; and the effect of the few symbols required for the teeth, which when explained were so easily remembered, was to convey the writer's meaning in the fewest and clearest terms, and obviate the necessity for the frequently recurring verbal definitions.

The entomologist had already partially applied this principle with much success; and the signs σ and ϕ for male and female constantly occurred in his descriptions. The astronomer had early availed himself of it in the signs \odot and p for the sun and moon; but the geometrician and algebraist had gained most triumphs by yielding this powerful instrument for condensing the products of thought, as had been clearly shown by Mr. Babbage in his admirable paper "On the Influence of Signs in Mathematical Reasoning."

Meeting of the General Committee on Monday, and arrangements for the ensuing year.

The Marquis of Northampton having taken the chair, the minutes of the last meetings at Southampton were read and confirmed. The invitations for 1849 were next read, those from Birmingham being of the most general, warm, and cordial kind, from every public body in the place.

Bath also, through Dr. Daubeny, put in a modest claim for 1850. Ipswich requested a "visitation," which caused a good laugh; and Derby intimated an intention to ask the Association at an early period. Professor Lloyd also hoped, though not yet ripe, that Dublin might have a second turn.

Mr. Wills eloquently enforced the Birmingham claim for priority, and was seconded by a member of the Corporation. The Dean of Ely spoke highly of our former reception there, and moved that the invitation should be accepted; which being seconded by the Treasurer, was carried by acclamation.

Colonel Sabine stated, that having consulted Sir Robert Peel, that gentleman had advised them to elect a President out of their own body; and Dr. Robison of Armagh was accordingly proposed for that distinction, and unanimously chosen. Professor Stevelly noticed that Dr. Robison would have been at Swansea but for unavoidable circumstances; and that he had that very morning received from him an

account of the falling stars seen by him on the 10th of August.* Colonel Sabine also stated that the Earl of Harrowby, Lord Wrottesley, Sir Robert Peel, Mr. Darwin of Shrewsbury, Mr. Faraday, Sir David Brewster, and Professor Willis, had accepted the office of Vice-Presidents, and pronounced a handsome eulogium on this very gratifying nucleus.

James Russell, Esq., was elected Local Treasurer; Messrs. Chance, Tindal, R.N., Wills, and Fletcher, the four Local Secretaries.

Mr. Hutton moved the re-election of Colonel Sabine, J. Taylor, and Professor Phillips, as General Secretary, Treasurer, and Assistant-General Secretary. Carried unanimously. On the motion of Sir C. Lemon, the month of September was fixed for the meeting—the exact day for assembling being left to be fixed by the Council.

Thanks were voted to the chair, and the meeting adjourned.

Above 800 names, including ladies, were enrolled at the close of the Swansea meeting.

The lectures delivered by Dr. Percy of Birmingham on the smelting and manufacture of copper ore, and by Mr. Carpenter, on the structure of shells, were of the most popular character, and very complete expositions of these subjects.

The Mayor's dinner on Tuesday was sumptuous, and the soiree which followed, all that could be desired.

At the meeting of the General Committee, on Wednesday, at one o'clock, Lord Northampton in the chair, the following recommendations were adopted:

1. *Those not involving Grants of Money, or Applications to Government, &c.*

That Dr. Schunk be requested to continue his investigations on Colouring Matters.

That Dr. Andrews be requested to prepare a report on the Heat developed in Chemical Action.

That Mr. R. Hunt be requested to prepare a report on the present state of our knowledge of the Chemical influence of the Solar Radiations.

That Professor E. Forbes, Dr. Playfair, Dr. Carpenter, and M. A. Hancock, be a Committee to report on the Performing Apparatus of Mollusca.

That Mr. Mallet be requested to continue his preparation for a report on the facts of Earthquakes.

That Mr. G. G. Stokes be requested to prepare a report on Physical Optics, in continuation of Dr. Lloyd's report on that subject.

That the communication of Dr. Percy on the extraction of Silver by the wet way, be printed entire in the next volume of Transactions.

That a communication by Joseph Glyn, Esq., on Hydraulic Pressure Engines, be printed entire in the next volume of Transactions.

That a communication by Mr. J. P. Budd, on the advantageous use made of the gaseous escape from the blast furnaces of Ystalyfera, be printed entire in the Transactions.

That the Assistant General Secretary be authorized, on consultation with Professor Powell, to insert in the next volume of Transactions, such portions of Professor Powell's communication on Luminous Meteors, as may be necessary to complete the recorded observations of that phenomenon.

That the Committee appointed in 1838, for determining the resistance of railway trains, be re-appointed, for the purposes of repeating those experiments at the high velocities, and in the altered circumstances of railways at the present time,—the following gentlemen to form the Committee—viz: Mr. Hardman Earle, Mr. George Rennie, Mr. Edward Woods, Mr. T. Froude, Mr. J. Glynn, Mr. Wyndham Harding, and Mr. J. S. Russell.

That the Assistant General Secretary be requested to form a complete list of all the recommendations that have been made by the Association, accompanied by a report of the manner and extent to which these recommendations have been carried into effect; to be

* Afterwards read in Section A, on Tuesday. Lord Northampton pleasantly observed that he was a falling star, and not Dr. Robison.

printed and placed in the hands of the Committees of Sections.

9. Grants, or renewal of Grants of Money.

That Mr. Birt be requested to undertake the reduction and discussion of the electrical observations made at Kew, with the sum of 50*l.* at his disposal for the purpose.

That Sir H. T. De la Beeche, Sir Wm. Hooker, Dr. Daubeny, Mr. Henfrey, and Mr. Hunt be requested to investigate the action of carbonic acid on the growth of plants allied to those of the coal-formation, with the balance of the original grant (5*l.*) at their disposal.

That Mr. Spence and Mr. T. V. Wollaston be a Committee for the purpose of assisting Mr. Newport in drawing up a report on Scorpionidae and Tracheary Arachnidae, with the sum of 10*l.* at their disposal.

That Professor E. Forbes and Professor T. Bell be a Committee for assisting Dr. T. Williams in drawing up a report on the state of our knowledge of British Antellidae, with 10*l.* at their disposal.

That H. E. Strickland, Esq., Dr. Daubeny, Dr. Lindley, and Professor Henslow be requested to form a Committee for conducting experiments on the vitality of seeds, with 10*l.* at their disposal.

That Professor E. Forbes, and the other members already named on the Committee for Dredging, with the addition of Colonel Portlock and Dr. Williams, be requested to continue their investigations, with 10*l.* at their disposal.

That Dr. Lankester, Mr. R. Taylor, Mr. W. Thompson, Mr. Jenyns, Professor Henslow, Mr. A. Henfrey, Sir W. C. Trevelyan, Bart., and Mr. Peach be requested to continue their superintendence of the drawing up of tables for the registration of periodical phenomena, with 5*l.* at their disposal.

That certain bills, amounting to 13*l.* 10*s.*, on account of anemometrical observations, formerly carried on at Edinburgh, be paid; and that the anemometer be transferred to the Assistant General Secretary, at York.

That the sum of 100*l.* be placed at the disposal of the Council, for the expenses of Kew Observatory.

3. Involving application to Government, &c.

That the President and General Secretary be authorized to apply to her Majesty's Government for the continuation of the meteorological and magnetical observatory at Toronto, up to December 31st, 1850.

The grant of 100*l.* for the Kew Observatory was read, together with the draft of a resolution by Col. Sabine, expressing the concurrence of the General Committee in the opinion of the Council as to the expediency of discontinuing Kew Observatory and entrusting to the care and direction of the Council the steps to be taken for its discontinuance. Through-out the discussion that ensued, a general feeling of regret prevailed, and also an unwillingness to risk the disturbance of the continuity of the observations. It seemed, however, to be generally understood that no positive steps would be taken before the meeting at Birmingham; so the resolution passed. For consideration then, also, Colonel Sabine submitted a notice of motion to the effect that Presidents of former years should, *ex officio*, and as a mark of respect, be permanent members of the Council.

At the concluding general meeting, at three o'clock, the above resolutions were communicated to the body at large, and the usual valedictory and complimentary forms observed. The announcement of the numbers present at Swansea, contrasted with the assemblages at other places, closed the proceedings of the eighteenth meeting of the British Association.

Tickets issued at Swansea:—

Old annual members	51
Old life ditto	149
New annual ditto	23
New life ditto	3
Associates	388
Ladies	205
Foreigners	15
Reporters	13

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The numbers at Oxford were 1250; at Southampton, 860; Cambridge, 1090; York, 940; Cork, 370; Plymouth, 650. These announcements were made in compliance with the desire of the local treasurer, and were received with much satisfaction. Indeed, with every circumstance connected with this meeting at Swansea, the inhabitants of the town and neighbourhood, as well as of the principality generally, have every reason to be pleased. We anticipate many permanent adherents from the numerous associates of the year, and we have already heard for the first time, intentions expressed to meet at Birmingham.

LITERARY AND LEARNED.

BRITISH ARCHEOLOGICAL ASSOCIATION.

WORCESTER CONGRESS.

Thursday August 17.—The Meeting has hitherto proceeded with the *éclat* and utility we predicted; the former being sustained by the hospitalities of the city and neighbourhood; and the latter by the labours of the members of the Association in exploring antiquities and reading interesting papers.

On Monday, E. Webb, Esq., the Mayor, received Lord Alrert Conyngham and such of his subjects as had arrived up to that time in corporate state at the door of the Guildhall, which was handsomely ornamented, and the walls decorated with fine rubbings of brasses from Fladbury Church and others. About 200 persons being assembled, the President delivered the address usual on opening the Congress, of which the following are portions:—"Alas! that at this meeting we should have to deplore the loss, since our last Congress, of some of our most valued members, by death—of individuals who were dear to many of us, from a personal knowledge of their worth, and who shed the lustre of their well-established reputation for antiquarian science upon our Society. But, gentlemen, the very science which we love teaches us the perishable nature of all that has to do with this earth, and the employment of our intellect upon antiquarian or any other science would indeed be worse than idle, did not that intellect, thus freed from rust, cause us alone to value, and therefore make us endeavour to prepare for, that better world which cannot pass away, and where the pain felt, from the separation from friends, cannot be experienced." His Lordship passed rapidly in review the veneration of antiquities among the most ancient nations; and coming down to our own country, said:—"We first read of an Antiquarian Society being founded by Archbishop Parker in the year 1570—about twenty of the members were accustomed to assemble from time to time in the house of Sir Robert Cotton; in 1589, the society petitioned Queen Elizabeth for a building and a charter, but with what success we know not; the reputation of the society, however, gradually increased until it excited the fears of James the First, who, alarmed lest it should discuss public transactions, dissolved it. At the commencement of the eighteenth century it again revived, and grew into such importance that in 1751 the members obtained a charter of incorporation, the power to constitute statutes, and to act under a common seal:—the original object of their inquiries appears to have been British antiquities and history, although the enlarged operations of the society now embrace every subject of ancient and mediæval relics and traditions. From the cultivation and extension of this antiquarian taste has sprung our modern institutions of similar tendencies: of these, the Archeological Association may boast of the widest range and the loftiest objects. Its peculiar constitution, its open meetings, its utter rejection of any spirit of exclusion, the zeal and promptitude with which at all times its members are ready to assist every inquiry, and to aid as far as lies in their power the prosecution of every laudable design for the discovery and preservation of the relics of mediæval or ancient times, cannot fail to render it one of the most useful societies of the present age. Its annual congress, whilst offering variety and amusement, cannot fail to increase and enlarge the field of its utility, by bringing various minds into contact, and by asso-

ciating together persons of intelligence, who might otherwise have never met; it will then, upon the return of the members to their own localities, spread a love of whatever is curious or interesting that has been preserved to us from the ravages of time. The historian is deeply indebted to the antiquary, and to those most curious and interesting analogies by which genius and research frequently throw new lights upon the characters and motives of the distinguished actors of the past. The beautiful architectural remains, the exquisite specimens of the Cameo and Intaglio, the artistic skill displayed in the cutting of gems, the graceful designs and formal beauty of some of the antique pottery, the sharpness of outline, correctness of drawing, and, above all, the beautiful imagery upon the reverses of coins, which have descended to our times, can only be thoroughly appreciated and valued by those whose taste has been refined and understanding cultivated by antiquarian research. Of the encaustic painting of the ancients we know little: their Mosaics, however, have survived, and many specimens, after the lapse of twenty centuries, remain as fresh and as fair as when they were first laid down. It is, indeed, delightful to wander back to that mysterious past, and to retrace the way to those lands of song and art by the vestiges of such beautiful relics as these."

Mr. T. Wright then read a note on the Worcester-shire antiquities exhibited to the Association by Mr. Ledsam, the high sheriff of the county. They were chiefly early English.

Mr. Fairholt read a paper on early monumental effigies, illustrative of the tomb of King John in the Cathedral. He took a view of the olden modes of sepulture from the Saxon period, when the coffins were cut from the solid rock, and hollowed out, being covered with a slab, and on which slab elaborate carving appeared, that defied the ravages of that universal spoiler Time, and transmitted down to us the strongest evidence of the peculiar genius of the people, and their proficiency in at least one of the fine arts. Such was the common and almost universal mode of interment practised by our forefathers, and which could be traced as early as the ninth century, and was in general use to the reign of Henry VII., after which time it became of rare occurrence. Sometimes the coffins were placed just below the floor of the church in which they were buried, so that when the slab was placed on the top, it formed a portion of the floor; at other times it was raised above the floor, as in the case of John, in Worcester Cathedral. Oftentimes there were signs and emblems of the professions of those who were mouldering into dust, when in the possession of life and health. Thus might be seen the sword on the tomb of a soldier, the crozier on that of an abbot, and a horn for the hunter. He then alluded to the different modes of interment among the Romans, the Saxons, and the Normans, and to the practice of burying in full dress, as it were. Ecclesiastics were buried with all their jewels and other valuables, which contributed, while alive, to support their worldly dignity; and when King Henry II. was taken to Fontainebleau to be buried, he was arrayed in his royal robes. In the tomb of King John, the city of Worcester possessed one of the most valuable relics of antiquity, a splendid specimen of art, and a most perfect representation of the body buried beneath. In his last moments, that unhappy monarch appeared to have taken hurried steps for his soul's health, and repented him of his misdeeds. He directed his body to be buried in the Church of St. Mary and St. Wulstan, now Worcester Cathedral, and in his last moments commended his soul to God and St. Wulstan. Over his head was placed a monk's cowl, as a atonement for all his sins, and he lay between the bodies of St. Oswald and St. Wulstan. His body was taken to the high altar in the reign of Henry VII., and his effigy laid upon the top of the stone coffin in which slept his mortal remains. The stone coffin was, most probably, originally on a level with the floor of the Cathedral. On each side of his head were two diminutive figures of bishops, each swinging a censer: these were supposed to represent St. Oswald and St.

Wulstan, between whose remains he reposes. Now, he called on the company to mark, how singularly truthful the monument which covered the remains of that monarch was a representation of the royal prince who reposed beneath it. In 1799, that tomb was opened, and the sculptured figure found to be an exact counterpart of John—his head, in place of the regal crown, being enveloped in the celebrated monk's cowl. His left arm was bound to his breast, and his right hand grasped a sword. The sword was very much decayed, but the scabbard was in a better state of preservation. And there he lay, in the words of one of our greatest poets—

"But now a king, now thus—
A clod, and module of confounded royalty."

Mr. Roach Smith said, that the disregard to the conservation of our various national monuments was, unhappily, even at the present day, much greater than was supposed. It was not only in unprotected localities that acts of vandalism were committed, but even some of our most public and sacred places were not safe. If objects of such notoriety were destroyed, how could they expect that the obscure, but not less valuable remains of more remote periods would be preserved, unless Parliament could be induced to lend its powerful assistance?

Mr. Wright then proceeded to read a paper "On the Romantic Materials of History, illustrated by the Autobiography of Edwin, Bishop of Worcester."

The President pointed attention to the beautiful specimens of painted glass in the hall, executed by Mr. Rogers, of the place, and standing a comparison with the finest examples of mediæval times.

Refreshments, liberally supplied by the mayor, were served in the adjoining rooms, and the company separated, highly satisfied with their reception, and the proceedings of the evening.

Tuesday.—A grand breakfast, given by the Mayor and Corporation in the Town Hall, opened the second day, and the members, conjoined with that body in state robes, &c., attended divine service in the Cathedral. They were met at the north entrance by the Dean, Canons Wood and Grove, and Honorary Canons Claughton and Hastings. "Dr. Clarke's service in F. was sung by the choir to the *Te Deum* and *Sublate*, and the anthem, was "The Lord is very great"—Beckwith.

The company then re-assembled at the Assembly Rooms, and Mr. Arthur Aschapel proceeded to a lecture upon the architecture of our early ecclesiastical buildings, the subject bearing particularly upon the style in which Worcester Cathedral was built, with remarks and inferences as to its age, and the different periods at which it was erected, &c. He favoured the opinion that it was of Saxon origin, or, at all events, if it ever had been a Roman or Norman structure, no more remained except the crypt, which was just under the choir. After minutely explaining all the details and grounds for his opinion, by reference to diagrams and plates of the different styles of architecture, he laid it down as a general rule, that the most distinctive characteristics of the two styles—Saxon and Norman—were to be found in the closeness of the joint; and he derived this opinion from the fact, that the Normans, having facilities for obtaining the celebrated Caen stone, which was a stone easy to be cut and worked, were thus enabled to make the blocks fit as it were close together, without the aid of much mortar or cement; whereas the Saxons, destitute of this advantage, were obliged to use a considerable quantity of mortar to counteract the roughness of the joints of the stone, but which mortar, however, from the peculiar excellence of its quality, eventually became nearly as hard as the very stone itself. He referred to numerous instances in which buildings of one style had been erected on the foundations of another, and it was well known that many churches, monasteries, and other ecclesiastical edifices, were built upon the site and foundation of the ancient temples devoted to the worship of the gods of the heathen mythology, as an instance of which, St. Paul's Cathedral might be mentioned, which was built on the foundations of the temple of

Diana. Having traced the building of the Worcester Cathedral to Wulstan, he pursued his line of argument to prove the building Saxon, and quoted an ancient missive used by Wulstan in summoning his clergy to the monastery on some special occasion, in which occurred these remarkable words: "I, Wulstan, summon you to meet me in the monastery in the crypt, which I have built." Therefore he thought, that on all grounds, the work of Worcester Cathedral might safely be pronounced to be Saxon, because Wulstan, who built it, was himself a stern Saxon: he never put a Norman into a benefice, and in all probability employed none but Saxon artificers. He was, in fact, what might be called the ecclesiastical Cedric; he founded both Pershore and Malvern, was the friend of Oswald, and risked his bishopric rather than speak the Norman French of those times, which was the chief reason of the attempts to deprive him of his see. Mr. A. alluded to the two fires which burnt the Cathedral, in 1113 and 1202, in the first of which they were told the lead was melted from the roof, and the great trees which formed the beams fell to the ground with a terrible crashing: nevertheless, the sepulchres of the two saints were unharmed, as was even the mat on which St. Wulstan knelt to worship. In 1216, the Earl of Chester came with a great army, and took the city, and the monks of the monastery had to spoil the shrine of St. Wulstan to gratify the rapacity of that haughty baron; and in 1226, say the annals of Worcester, the new work at the font was begun, Bishop Williams laying the foundation stone. From certain differences in the stone, he thought that the fire had injured one end of the church more than the other, and it being necessary to restore it, they chose to do so in the fashion of their own day, rather than in the style in which it was built before. When Cromwell's troops came to Worcester, they took all the old charters they could lay their hands upon, and purposely destroyed them, but from some ancient extracts, it had been found that the cloisters were built in 1220. He then explained the different descriptions of groining, as exhibited in Worcester Cathedral, and altogether gave a most interesting lecture, which was listened to with the greatest attention by the audience, and frequently applauded.

After the lecture had concluded, the company, under the guidance of Mr. Aschapel, examined the Cathedral, and went into the crypt, where he further explained the different styles of architecture. He pointed out the window in the upper south transept as one of the most beautiful specimens of perpendicular architecture extant.

The company then adjourned, and at eight o'clock in the evening met again in the Town Hall, when about 250 ladies and gentlemen were present, and the proceedings were commenced by Mr. Gutch, who read a paper upon the Visit of Queen Elizabeth to the City of Worcester. He commenced by observing that it was a gratifying thing as connected with this city, which had obtained the name of the Faithful City, from its fidelity to Charles II., that so many relics of ancient times still remained. The battle field of Worcester was well defined, and had been pointed out and recorded in maps and plans, and several of the houses of Worcester still retained a very ancient appearance. The visit of Queen Elizabeth took place on Saturday, the 13th of August, 1675, and a full account was given of it in Green's Royal Visits, by which it appeared that the citizens spared neither zeal nor expense in giving her Majesty a suitable reception. The Queen entered the city, riding on a white palfrey, and was met with the addresses of the Mayor and Corporation, and a regular orator, who was employed to make an oration. Mr. G. also read the journal of the events during the week her Majesty sojourned in this city and the neighbourhood, and concluded a very interesting paper amidst the applause of the company.

The Secretary then proceeded to read a paper by Mr. J. O. Halliwell, on the superstitious "Custom of Cathening, as recently practised in Worcester-shire."

St. Catharine's Day, November 25th, formerly

occupied no inconsiderable position in the calendar of superstitions and customs. To this does Nasgeorgus allude, as translated by Barnaby Googe—

"What should I tell what sophisters on Catharine's day
Devise,
Or else the superstitious joys that malsters exercise?"

The earliest notice of Cathening that has been yet met with, at least under that name, occurs in Le Motte's "Essay on Poetry," 1790, where he says that "St. Catharine is esteemed in the Church of Rome to be the saint and patroness of the spinsters, and her holiday is observed, not in Popish countries only, but even in many places in this nation; young women meeting on the 25th of November, and making merry together, which they call *Cathening*." I am not acquainted with a more particular account of what this merry-making consisted, and it was clearly different from the Worcestershire custom, which is thus described by a late anonymous writer. "About this season of the year, the children of the cottages used to go round to the neighbouring farm-houses to beg apples and beer for a festival on St. Catharine's day. The apples were roasted on a string before the fire, stuck thickly over with cloves, and allowed to fall into a vessel beneath. There were set verses for the occasion, which were sung, in a not unmusical chant, in the manner of carol singing. They commenced thus—

"Cattern and Clement comes year by year;
Some of your apples and some of your beer,
Some for Peter, some for Paul,
Some for him who made us all!
Peter was a good old man,
For his sake give us some:
Some of the best, and none of the worst,
And God will send your souls to rest."

It concluded with the lines—

"Up the ladder and down with the can,
Give me red apples and I'll be gone!"

The ladder alluding to the store of apples generally kept in the loft, or somewhere at the top of the house; and the can to going down into the cellar for beer.

Until within a very recent period, it was the custom of the Dean and Chapter of Worcester, yearly, on St. Catharine's day, being the last day of the annual audit, to distribute amongst the inhabitants of the College precincts a rich compound of wine, spices, &c., which was specially prepared for the occasion, and called the Cattern or Catharine bowl.

Other versions of the lines were quoted from Mr. George Stephens and Mr. Allies; the latter of whom said—"I recollect that, in my juvenile days, I once saw, at the season in question, apples roasting on strings before the kitchen fire at a farm-house in Leigh parish, in this county, in the manner above alluded to. They were studded thickly with oats, instead of cloves, and some of the apples so studded were not roasted, but each affixed on a wooden skewer, and dredged all over with flour, resembling, in a manner, a dandelion in full seed."

This day was, in fact, one of the numerous festivals on which matrimonial divinations were formerly employed; and it may be interesting to some of the fair sex if we furnish them with an infallible method of securing a dream of their future husbands practised with great success on this eventful day. My account is taken from Mother Bunch's "Golden Fortune Teller," a chap-book printed during the latter part of the last century:—

"THE CHARMS OF ST. CATHARINE.—Let any number of young women, not exceeding seven, nor less than three, assemble in a room by themselves just as the clock strikes eleven at night. Take from your bosom a sprig of myrtle, which you must have worn there all day, and fold it up in a piece of tissue paper. Then light up a small chafing-dish of charcoal, and let each maiden throw on it nine hairs from her head and a paring from each of her toe and finger nails. Then let each sprinkle a small quantity of myrrh and frankincense in the charcoal, and, while the vapour rises, fumigate the myrrh with it. Go to bed while the clock is striking twelve, and place the myrtle exactly under your head. You will then be sure to dream of your future husband."

After its conclusion, his Lordship asked the Very Rev. the Dean whether the custom of Catherning, as described, was still kept up by the Dean and Chapter of Worcester, to which he replied that it was kept up to the present day.

Mr. Planché then read an interesting paper "On certain Peculiarities in the Ladies' Head-dresses of the fourteenth century." After which, another interesting paper, by Dr. Lukis, "On early remains in the Channel Islands and in Wales," was read. The principal subject was with respect to the nature and origin of cromlechs.

Wednesday was spent in an excursion to Sudeley Castle, where the Association were sumptuously entertained by the Messrs. J. and W. Dent. The old castle, of about the middle of the fifteenth century, received about 150 guests, who, after admiring the finely-carved furniture and other articles of vertu with which the mansion is filled, dined under a tent, and only got back in time to Worcester for the evening meeting, of the proceedings at which and the papers we have already mentioned, we trust to give a good account in subsequent *Gazettes*.

Thursday.—To-day is devoted to excursions to Evesham, Malvern,* and other remarkable spots in the neighbourhood, where ancient remains are to be found from British and Roman to Mediæval periods.

Nothing could exceed the manner in which the Association have been welcomed and the pleasures they have enjoyed.

THE SUSSEX ARCHEOLOGICAL SOCIETY.

Annual Meeting at Lewes.—The general annual meeting of this rapidly increasing society, held this year at Lewes, was in no respect inferior to its predecessors, either as regarded the preparations made for the reception and entertainments of its members and their friends, or in relation to the rank and numbers of those who filled the great room of the County Hall on Thursday week.

The Earl of Chichester was the chairman of the meeting, and the local committee consisted of Messrs. Lower, Harvey, and Button, whose arrangements were in every respect admirable; the only drawback to the general effect of the meeting being the unfavourable state of the weather, towards the close of the day the rain descending in torrents. In spite of this, the banquet was attended by upwards of two hundred members of the Society and their friends; and the various speakers to, and proposers of, the toasts expressed but one opinion of the gratification they had derived from the intellectual treat that had been so liberally and carefully provided for them. Papers during the day were read by Mr. Blauw "on the Priory of St. Pancras," "on the Subsidy Roll for the Rape of Lewes in 1296," and "on the several Journals of King Edward in Sussex;" by Mr. M. A. Lower, "on the Manufacture of Iron;" by Mr. Britton, "on Herston-cum-Castle;" by Mr. Blencowe, for the Rev. E. Turner, "on the Journal of Richard Stapley;" and by Mr. Dixon, "on Celts." The dis-

cussions on these papers, in which many of the members of the Society took part, were of great interest, and some exceedingly curious incidents and details were referred to. An extensive collection of objects of archaeological interest had been gathered together, and were examined by the meeting with great curiosity. Among the contributors were the Earl of Chichester, Mr. Blauw, Mr. Lower, Mr. Windus, Mr. Albert Way, Mr. Dicker, Mr. Figg, Mr. Baxter, Mr. Barratt, Mr. John Britton, Mr. Harvey, &c. &c. The whole meeting was of the most gratifying description, not only as evidence of the progress of archaeological science in the provinces, but from the friendly and social manner in which the nobility and gentry of the county of Sussex came forward to assist the archaeological labourers in their endeavours to preserve the interesting relics of by-gone times from destruction and oblivion. We must content ourselves for the present with this brief summary of the third annual meeting of the Sussex Archaeological Society, though we think we shall be tempted to return to some of the valuable communications brought under notice.

LITERARY INTERCOURSE WITH AMERICA.

The New York Evening Mirror republishes Mr. Lester's (the American's) speech at the last Literary Fund Anniversary, and accompanies it with the following and other commentaries on the plan he proposed for a union of the literary men of the two nations.

"We have read it with pride and pleasure, and we doubt if there be a sentiment in it to which any friend of literature in this country will not heartily respond.

"Since the time of Alfred there has been a glorious army of scholars battling for us in England. She has never had a great author who has not studied and thought for us—nor has a noble heart ever beat in England in whose pulsations we had not a share. What American does not feel that he has rights in Shakespeare's and in Milton's name? What return have we ever made to that noble land for the rich legacy she has left us? We have denied her authors a copyright here, while we have hailed the appearance of every new work of theirs with pleasure.

"Our publishers have grown rich on their reprints; and when some one, more scrupulous than the rest, has given a copyright to the owner of the book, some half-a-dozen pirated editions have been thrown into the market within a few days. English authors have ridiculed us. Yes; but the world laughed at us only because we took seriously what needy adventurers intended, at worst, only for a joke. But have Bulwer, and Campbell, and Moore, and Macaulay, and Warren, and Tupper, and D'Israeli, and Montgomery, and Hallam, and Chalmers ever rallied against us? What if they had! They would never have quenched the warm, deep sympathy that stirs the hearts of the scholars and authors of Great Britain over the sea. There is not a home in England where Americans are not greeted with good old Saxon cheer, from the stately halls of the Duke of Northumberland to the quiet cottage home of Tupper, nestled in that sunny vale of Albury. There is not a writer in all the British islands who does not, as he takes up the pen, think of the twenty millions of readers he may have in this reading New World.

"Our authors and travellers tell us these things, and not one of them but brings away from those green islands a thousand tender souvenirs, which make the home of his fathers look warmer, and greener, and kinder as his rocky coast sinks in the sea.

"Why, then, shall we not inaugurate, once for all, a glowing brotherhood between the Literary and Scientific men of the two nations? Let us have a great festival of all the literary men of America in New York this fall. Let some of our most illustrious authors sign a call, and address it to the friends of literature in every part of the United States, inviting them to assemble in New York. Let subscriptions be opened for a public dinner, after the style of the Royal Literary Fund of London.

"We can put an Irving in the chair, and his name

is a charmed word to all Europe—who can doubt that scholars, and authors, and professors, and the friends of learning, will come flocking into the city from Maine to New Orleans, and from the Upper Missouri to the green glades of Florida? If an executive committee were formed for this purpose, and an invitation were sent, the Literary Fund of London would probably delegate one of its distinguished authors to unite in our deliberations.

"Such a Congress would do more to promote the cause of learning, and humanity, and progress in this country, than all the Congresses that ever sat in the Capitol—it would do more to join the hearts of the great and good men of Europe and America together, than any diplomatic scheme ever invented.

"We want a great national banquet of learned men, and the friends of science, to come together for a single evening, to celebrate the triumph of humanity, and letters, and art—to sympathize with the suffering, the ignorant, and the distressed—to spread light and knowledge among mankind—to borrow hope and courage for the future in the noble work of illuminating the world. Such would be the occasion to prepare a fund for the relief of destitute artists and scholars—that would be the moment for Mr. Lester to redeem his generous pledge of forwarding during the year an humble offering from some of the literary men of America, to aid in the humane objects of the Royal Literary Fund of London. We do not entertain a doubt that this plan can be carried out."

ORIGINAL, AND CURIOSITIES OF LITERATURE.

PROVERBS AND POPULAR SAYINGS.

TAKE care of an ox before, and an ass behind.
We must take the crop as it grows.
Sunday woeing draws to ruin.
The devil's cow calves twice a year.
They that rise with the sun have their work well begun!
If one sheep leap the dike, the rest will follow.
If the mare has a bald face, the filly will have a blaze.
Longest at the fire-side soonest feels the cold.
Give God the first and last of every day.
East or west home is best.
Empty stalls make biting horses.
A good day's work may be done with a dirty spade.
As the wind blows seek your shelter.
Don't cast away the pail when the cow kicks.
Let your horse drink what he will, but not when he will.
The day the worthless man does well, there will be seven moons in the sky and one in the muck-midden, (i.e., never.)
A good calf is better than a calf of a good kind.
A man may take a horse to the water, but twenty cannot make him drink.
An old horse may die waiting for the grass.
Better a lean horse than an empty halter.
Better have the barn filled than the bed.
He that buys land buys stones.
You may beat a horse till he be sad,
And a cow till she go mad.
The tricks a colt gets at first backing,
Will while he liveth never be lacking.
Be the day never so long,
At length cometh even-song.
Under the furze is hunger and cold,
Under the broom is seek and gold.
If you would a good hedge have,
Carry the old leaves to the grave.
If you would have a good cheese, and have'n old,
You must turn'n seven times before 'n gets cold.
M. A. D.

P. B., 1848.

THE DRAMA.

Covent Garden—Royal Italian Opera.—On Saturday, Rossini's *Guglielmo Tell* was brought forward here, with the entire score remodelled by Signor Costa; and, probably, nothing more perfect than the instrumental and choral effects was ever heard in a lyrical drama; still the libretto is so weak and the dramatic story so uninteresting that the whole opera went flatly. The cast was not so strong as could have been desired, and Roger hardly supported the impression he made in the *Huguenots*; there was a want of method, a sort of drawing in the tone of his voice, that grated on the ear, and some of the transitions from the natural voice to the falsetto were positively unmusical. The chief attraction however, to connoisseurs in this opera is not dependent on the

* They were announced in the programme as follows:—
"No. 1. Excursion to Wollershill.—This fine old seat is eleven miles from Worcester, and the Congress has been very kindly invited to visit it by Charles E. H. Hanford, Esq. It is recommended that the party leave their carriages at the bottom of the ascent to Wollershill, and meet them again at Hinkley. They will then walk over the hill, passing the Roman camp on Bredon Hill, and the site of Elmley Castle, to Elmley church, which is well worthy of a visit.

"No. 2. Excursion to Evesham.—This interesting town is fifteen miles from Worcester. Dr. Beale Cooper has most kindly invited the visitors to his residence. In passing through Pershore, the Vicar has considerably offered to accompany them over the church. Mr. Bedford, of the Abbey, and the Rev. Mr. Chown, of the vicarage, Pershore, have politely intimated their wish to receive the visitors.

"No. 3. Excursion to Holt Castle.—Holt Castle is seven miles from Worcester, and is very interesting to the antiquary. The Congress has received a kind invitation to visit it from J. Pickernell, Esq.

"No. 4. Excursion to Malvern.—Malvern is eight miles distant from Worcester, and its fine old church will be open to visitors. Five miles beyond this town is a British encampment, to which a party will be accompanied by Mr. W. D. Saul, F.S.A., who will deliver a field lecture on that spot.

"At two o'clock, by the kind permission of Mrs. Thomas, the subterranean passage, at the White Ladies, will be opened for inspection to the visitors of the Congress."

cast of the principal characters, but rather in the rendering of the choral effects and the descriptive orchestral accompaniments, and, as we have said, nothing can be more magnificent than Costa's interpretation of the score. The overture was played in a masterly manner, and vehemently encoered, Lindley's violinello solo and the duo between the oboe and flute being perfectly delicious. Some of the pieces, too, throughout the opera, were also magnificently done; but the whole was too long, and the excitement gradually died away after the close of the second act. Every resource of the theatre seems to have been used in the production of the opera; the scenery by Messrs. Grieve and Telbin is beautiful, and the incidental dances by Miles. Grahn, Gontier, and Wauthier, all that can be wished.

On Monday a graceful compliment was paid to the lessee, Mr. Delafeld, for his exertions in upholding the lyrical drama. The entire establishment, from *prima donna* to call-boy, volunteered their services, and the *Donna del Lago*, part of *La Favorita*, the scene from *La Prova*, and a *Divertissement*, drew an immense audience. Without entering into the pounds shillings and pence value of this compliment, we are sure that Mr. Delafeld must highly appreciate such a voluntary and well-deserved testimony to his indefatigable and liberal management of the Royal Italian Opera.

The repetition of the *Huguenots*, this evening, induces us to offer two or three general remarks on that opera, which, with all its merits, we cannot rank on an equality with *Robert le Diable*. There are several faults in the *Huguenots*, the most obvious of which is its noisiness, so detrimental to the vocal parts. Were it often performed, or were other compositions of the same order to be common, in our belief they would ruin voices of the strongest quality frequently engaged in them. The melodies, also, though mostly well varied, are wanting in continuity and naturalness. The harmonies are fine and bold, showing a predilection for a few pet chords, which are consequently rather too much *harped upon*. The instrumentation is always heavy, and we feel as if it would be a relief to have something light, otherwise tender, thrown in. In fact, the score is crammed full of all sorts of instruments, and the result is power, rather than melodic beauty, combining the vocal parts. The choruses are massive, but, like the rest, want colour in the melodies of each division, — the delightful charm of the choruses of Mozart. In lieu of a more elaborate criticism at the close of the season, we have briefly noted these opinions, and we trust the most tasteful and learned connoisseurs cannot far dissent from their justice and accuracy.

ORIGINAL POETRY.

HOPE.
Love's barque was wreck'd — and so the crew,
According to their right law,
One of their comrades, Hope, o'erthrew
Into the rolling waters blue:
Who, sinking — gasping, grasp'd a straw!
Love wopt; and thought her life had set,
When thus poor drowning Hope she saw;
But soon they told her not to fret,
'Twas not, they said, the first time yet,
That Hope had lived upon a straw!

Scarcely said, ere 'neath that stormy scope
Hope floated, 'midst the crew's applause;
And now, so common is the trope,
That people rarely think of Hope,
Unless, alas! they think of straw!

CHARLES SWAIN.

SONNET.
NIGHT ON THE ADRIATIC.
How many varied lights around us beam!
On either side the silent wave below
Shines with a wandering meteoric glow,
That flits across its alabaster like a dream—
From the dark hold a fitful, fiery stream,
Tells of untiring toil and iron sweat—
On the far shore the lonely watch-lights gleam,
And over all the eternal stars are set.
All light speaks life. In action one is shown—
And one in rest its sign discovereth—
And one—the solemn sea, reveals alone
Its secret, spirit life in seeming death,
All light speaks life, and those fair stars abroad,
Seem instinct with the quenchless fire of God.

ROBERT FRANKSON.

VARIETIES.

Stowe.—The sale of this princely collection of objects of *verité* has been attended by hundreds of the curious, as well as by collectors from all parts of the country, and the prices realized have been very great, though, in some instances, particular "lots" have not brought so much as was anticipated.

The Pembroke Coins.—The second portion of this extremely valuable collection of coins and medals has found new owners under the hammer of Messrs. Sotheby and Wilkinson during the week. Many of the items were of great rarity, and brought corresponding prices, but we shall defer further comment till the sale has closed, when we propose to give details similar to those of the first portion in our last number.

George Stephenson, Esq.—The death of this eminent engineer must be added to our obituary. He was sixty-seven years of age, and one of the most distinguished of his profession.

The Art-Union.—The exhibition of the pictures, selected by the prize-holders of the Art-Union for the present year, was opened for private view last Saturday, at the Suffolk-street Gallery, and is now open to the subscribers and the public. Many of the works selected have already been noticed in our columns; and the exhibition, as a whole, is highly honourable to the artists, as well as to the fortunate possessors of their works.

A Welsh Announcement.—J. Bedlou, bookbinder, swine and cattle doctor, also immediate relief and perfect cure for persons in dropsy, canker, scurvy, king's evil, ague, &c. &c. &c.

Mesmerism seems to flourish in India. By the last journals we learn that a subscription has been begun at Hyderabad, by English and native gentlemen, to establish a mesmeric hospital, and that 1200 rupees down, and a monthly sum of 200, had been announced.

Gun Cotton.—In removing some small portions of this material remaining from the fatal explosion at Faversham, it ignited without any apparent cause, and severely scorched one of the two men employed in the work.

Literature.—A most interesting manuscript in German has just been discovered at Louvain. It is in folio, and contains 200 pages—the writing is in the beautiful running hand of the sixteenth century, with marginal notes in Latin, explanatory of the text. It was picked up in a grocer's shop when on the point of being brought into use for the purpose of trade. The volume contains chapters under the following heads:—1st, Grants and privileges of the Emperor Charles V., of the 28th March, 1522; 2ndly, Proceedings under the extraordinary trials of 1522; 3rdly, Proceedings under the ordinary trials of 1522; 4thly, On Wills; 5thly, Customs of Austria in regard to successions; 6thly, On Fiefs of the Church; 7thly, Grants to Styria, made in 1493, by the Emperor Maximilian; 8thly, Grants made by King Rodolphe of Habsbourg, in 1277, confirmed, in 1521, by King Ferdinand; 9thly, The Grants of 1368 confirmed in 1527 and 1532, by the Emperor Charles V. At the end of the volume are tacked various charters and diplomas of the Dukes William and Albert of Austria, and an original charter of the Emperor Maximilian, grandfather of Charles V. This manuscript very probably once formed part in the collection of Archives of the Great Council of Malines or of the Chancery of Austria.—*Brussels Herald.*

Paris.—A local in the palace of the National Assembly has been placed at the disposal of some lithographic artists, to reproduce the 900 portraits of the representatives of the people from the daguerreotype. The signature, date, and place of birth of every representative will be at the bottom of these portraits.

Brussels.—The inauguration of the equestrian statue of Godefroid de Bouillon, upon the Place Royale, took place on the 13th of this month, with great pomp. Mr. Hart, engraver, of this town, has been commissioned to strike a medal; one side, representing the head of Godefroid de Bouillon, and the other the monument itself.

LITERARY NOVELTIES.

It is not generally known that the new novel, "A Struggle on the Threshold," which has excited so much talk in the literary and fashionable circles, is from the pen of a daughter of Viscount Molesworth.

LIST OF NEW BOOKS.

Anyone; a Romance, 3 vols., £1 11s. 6d.
Bee Hunter, by J. F. Cooper, 3 vols., £1 11s. 6d.
Bonnett's Family Bethany, twelfth edition, 12mo, cloth, 5s.
Burns' (Jabes) Notes of a Tour in the United States and Canada, 18mo, cloth, 2s.
Coles on Spinal Affection, third edition, 12mo, sewed, 2s. 6d.
Colman's (H.) Agriculture &c. of France, Holland, Belgium, &c., 8s.
Conqueror of the New World and their Bondsmen, &c., 8vo, cloth, 6s.
Creasy's (E. S.) Text Book of the English Constitution, 8vo, sewed, 2s. 6d.
Guthrie's (Rev. W.) The Christian's Great Interest, seventh edition, 12mo, 2s. 6d.
Hand (The) Phenologically Considered, post 8vo, cloth, 4s. 6d.
Hep's (Dr.) Scripture Prints from Raphael, 5s.
Hutchinson's (Col.) Dog Breaking, 12mo, cloth, 6s.
Lee's (Edwin, Esq.) Continental Travels, 8vo, cloth, 10s. 6d.
McCrindle's Convent, second edition, 12mo, cloth, 5s.
Noel's (B. W.) Infant Piety, fourth edition, 18mo, cloth, 1s. 6d.
Pettit's (Rev. J. L.) The Abbey Church at Tewkesbury, royal 8vo, cloth, 6s.
Policies for the People, 8vo, cloth, 2s. 6d.
Potter's Elementary Treatise on Mechanics, second edition, 8vo, cloth, 2s. 6d.
Pusey's Sermons, second edition, 8vo, cloth, 10s. 6d.
Sherwin's (Mrs. H.) Root of the History of England, 12mo, cloth, 2s.
Sidney and Australian Hand-book, 1s.
Smith (Rev. J.) The Demerara Martyr, Life of, 8vo, cloth, 4s. 6d.
Stanley's (Dean) Faith and Practice of a Church of England man, 12mo, cloth, 6s.
Strickland and Melville's, The Dodo and its Kindred, 4to, cloth, 21s.
Walker's Key to Walsingham's Arithmetic, 12mo, 3s. 6d.

DENT'S TABLE FOR THE EQUATION OF TIME.

[This table shows the time which a clock or watch should indicate when the sun is on the meridian.]

1845.	h. m. s.	1846.	h. m. s.
Aug. 15 . . .	12 3 19.9	Aug. 23 . . .	12 23.1
20 . . .	3 5.8	24 . . .	3 5.2
21 . . .	2 51.3	25 . . .	1 4.2
22 . . .	3 36.4		

ADVERTISEMENTS.

HER MAJESTY'S THEATRE.

MILLY JENNY LIND.
LAST NIGHT BUT ONE OF THE SEASON.
The Nobility, Patrons of the Opera, and the Public are respectfully informed that a GRAND EXTRA NIGHT will take place on THURSDAY NEXT, AUGUST 22nd, 1845, when will be performed (last time) Donizetti's Opera.

LUCIA DI LAMMERMOOR.

Lucia, Miss Jenny Lind; Enrico, Sig. Colletti; Despatch, Sig. Bouche; and Edgardo, Sig. Gardoni. With various entertainments in the Ballet Department, comprising the talents of Miss. Cerio, Miss. Carolina Rossi, M. Perrot, and M. St. Leon.
It is also respectfully announced, that the FAREWELL NIGHT (being the Last Night of the Season) will take place on THURSDAY NEXT, August 24th, on which occasion MILLY JENNY LIND will appear in one of her favourite characters.

The Free List is suspended, the Public Press accepted.
Pit Tickets may be obtained, as usual, at the Box Office of the Theatre, price 10s. 6d. each, where applications for Boxes, Stalls, and Tickets, are to be made.

ROYAL ITALIAN OPERA, COVENT GARDEN.

THREE EXTRA NIGHTS, AT REDUCED PRICES.
The Directors of the Royal Italian Opera have the honour to announce that Three Grand Extra Performances will take place during the ensuing week—viz., on MONDAY, August 21st; WEDNESDAY, August 23rd; THURSDAY, August 24th; which evenings will most positively terminate the season.

The entertainments selected for the above occasions will embrace three of the grandest performances of the repertoire, and in order, previous to the final closing of the season, to afford to a widely-extended class of musical amateurs and others an opportunity of witnessing the unparalleled combination of artistic talent attached to the Royal Italian Opera, the Directors have determined on these evenings to reduce the price of admission to the following moderate scale:—Boxes for four persons, Pit Tier, 42 2s.; Boxes for four persons, Grand Tier, 42 3s.; Boxes for four persons, First and Second Tiers, 42 1s. 4s.; Boxes for four persons, Third and Fourth Tiers, 42 1s. 4s.; Orchestra Stalls, 10s. 6d.; Box Stalls, 7s. and 10s. 6d.; Amphitheatre Stalls, 4s. 6d.; Amphitheatre, 2s. Amphitheatre, 1s. 6d.

The performance will be as follows:—
MONDAY, August 21st—NORMA, a Scene from LA CENERENTOLA, the Last Act of the LA FAVORITA, and a Divertissement, supported by Miss. Grist, Miss. Corbani, Miss. Albani, Sig. Mario, Sig. Salvi, Sig. Marini, Miss. Lucie Grahn, Miss. Robert, &c.
WEDNESDAY, Aug. 23rd—The Grand Opera LES HUGUENOTS, and a Divertissement, supported by Miss. Pauline Viardot, Sig. Mario, Sig. Tancini, Sig. Marini, Sig. Papadopoulos, Miss. Lucie Grahn, &c.
THURSDAY, August 24th (positively the last night)—LUCERIA BOROIA, and other entertainments.

Director of the Music, Mr. Costa.
The Opera will commence at eight o'clock on each evening.

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4000	12 years	400 0 0	787 10 0	6287 10 0
3000	10 years	366 0 0	787 10 0	6067 10 0
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